SAN JOAQUIN COUNTY
PUBLIC HEALTH LABORATORY

SERVICES AVAILABLE TO

PHYSICIANS AND

CLINICAL LABORATORIES

STEPHEN A. WILLIS, ACTING LABORATORY DIRECTOR

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Stockton, CA 95201-2009
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIMEN COLLECTION AND SUBMITTAL</td>
<td>1</td>
</tr>
<tr>
<td>LABORATORY FORM.</td>
<td>1-A</td>
</tr>
<tr>
<td>REPORTING OF RESULT.</td>
<td>2</td>
</tr>
<tr>
<td>STATE REGULATIONS FOR COMMUNICABLE DISEASE CONTROL.</td>
<td>2</td>
</tr>
<tr>
<td>COMMUNICABLE DISEASE TELEPHONE NUMBERS.</td>
<td>2</td>
</tr>
<tr>
<td>TEST DESCRIPTIONS.</td>
<td>3</td>
</tr>
<tr>
<td>STATE HEALTH DEPARTMENT AND CDC SERVICES.</td>
<td>18</td>
</tr>
<tr>
<td>PUBLIC HEALTH LABORATORY REFERENCE SERVICES.</td>
<td>19</td>
</tr>
</tbody>
</table>

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SPECIMEN COLLECTION AND SUBMITTAL

The Public Health Laboratory does not have facilities for specimen collection. All specimens for examination should be submitted in containers supplied by the Public Health Laboratory. These containers have been designated to meet Federal postal regulations for mailing and transporting of biological specimens, and to meet the requirements for certain types of specimens or laboratory tests. Use the container(s) provided for the test(s) requested. Containers can be ordered by calling the laboratory at (209) 468-3460.

No preservative should be added to any specimen other than those already provided in specimen bottles unless otherwise instructed.

After collecting the specimen, securely tighten the cap of the bottle, write patient's name and date collected on the bottle label and place the bottle in the appropriate shipping container when present. Wrap laboratory request form around the outside and place in the shipping container. Seal shipping container. Make sure the container is properly addressed and stamped with required postage. Mail or deliver specimens immediately after collection. Specimens that are courier delivered may be placed in zip lock specimen transport bags. Place specimen in zip lock bag; securely fasten zip lock, place laboratory form in outer pouch. Use appropriate shipping containers for infectious agents, such as cultures for identification or if specimen must be transported by refrigeration or frozen with dry ice. Blood collected for serologic examination should have no preservative or anticoagulant and should not be frozen, as hemolyzed blood is unsatisfactory for testing purposes. (Immediate refrigeration also causes hemolysis.) Contact the Public Health Laboratory if unsure on method of shipping or handling of specimens.

The laboratory request form must accompany each specimen. These forms must be legible and filled out completely. Specimens for tests performed at the State Health Department or the Centers for Disease Control must be submitted through the local Public Health Department.

The specimen in an appropriate mailing container may be mailed directly to the Laboratory.

The Laboratory mailing address is P.O. Box 2009, Stockton, CA 95201-2009; Telephone (209) 468-3460. Hand-delivered specimens may be brought to 1601 E. Hazelton Avenue, Stockton. The laboratory is open from 8:00 am to 5:00 pm, Monday through Friday (excluding holidays). Courier services may be provided, contact the Laboratory.
REPORTING OF RESULTS

The report of examination results will be made directly to the physician or agency submitting the specimen. Test results are not released to patients.

All clinical and public health laboratories are required to notify the Health Officer of laboratory findings suggestive of those communicable diseases of public health significance: diphtheria, gonorrhea, syphilis, typhoid; listeria, vibrio, or aeromonas infections, and food poisoning outbreaks.

Each notification shall give the date and result of the test performed, the name and when available, the age of the person from whom the specimen was obtained, and the name and address of the physician for whom such examination or test was performed.

STATE REGULATIONS FOR COMMUNICABLE DISEASE CONTROL

PUBLIC FOOD HANDLERS. No person known to be infected with or suspected of being infected with a communicable disease shall engage in the commercial handling of food, or be employed on a dairy or on premises handling milk or milk products, until he is determined by the Health Officer to be free of such disease, or incapable of transmitting the infection.

LABORATORY TESTS FOR THE RELEASE OF CASES OR CARRIERS OF COMMUNICABLE DISEASES. When laboratory tests are required for the release of cases or carriers of diphtheria, typhoid fever, salmonellosis, or shigellosis, the tests shall be taken by the Health Officer or his representatives and shall be submitted to a public health laboratory approved by the State Department of Health. Specimens may be sent to laboratories not so approved, provided the specimens are divided and a portion of the specimens are sent to an approved laboratory. Release shall be considered on the basis of the report of the approved laboratory only. In addition, specimens taken for the diagnosis of rabies or botulism shall be sent by the physician to an approved public health laboratory.

COMMUNICABLE DISEASE TELEPHONE NUMBERS

Health Officer 468-3823 Communicable Disease Office or Morbidity Office 468-3822
TEST DESCRIPTION

AIDS (See HIV Infection)

ACTINOMYCOSIS (See Mycotic Infection)

AMEBIASIS (See Parasitic Infection)

ANTHRAX

TEST: Cultural isolation and identification of *Bacillus anthracis*.

SPECIMEN: Pus, tissue, infected material, etc. Blood specimens are of little value. Specimens from animals should be submitted to the nearest Department of Agriculture Laboratory.

CONTAINER: Sterile container may be used. Use laboratory form and write in OTHER TEST/COMMENT" Anthrax Culture".

COMMENT: Contact laboratory prior to submission of specimen.

TURN AROUND TIME (TAT): 1 - 7 days.

BARTONELLOSIS (Cat Scratch Fever)

TEST: Contact PH Laboratory for proper specimen collection. Test offered by State Dept. of Health on a limited basis.

BOTULISM

TEST: Examination of 10 ml sterile serum and feces.

COMMENT: Contact Laboratory prior to sending specimens. Also contact the Communicable Disease Office. Examination performed at State Health Department Laboratory.

TAT: 1 - 20 days.

BRUCELLOSIS (Undulant Fever)

TEST: For culture identification, consult laboratory. No agglutination test offered, culture confirmation and referral to State Dept. of Health.

CAMPYLOBACTER

TEST: Cultural isolation and identification of *Campylobacter* species.

SPECIMEN: Feces or rectal swab.
CONTAINER: See Salmonellosis.

COMMENT: In addition to feces, C. jejuni has been isolated from blood, and rarely, spinal fluid.

TAT: 2 - 8 days.

CANDIDIASIS (See Mycotic Infection)

CAT SCRATCH FEVER  See BARTONELLOSIS

CHLAMYDIA

TEST: Isolation and identification procedures. Direct Antigen detection by Fluorescent Antibody Test (DFA). Amplified test for detection from genital specimens and urine specimens.

CONTAINER: For isolation, use M4 Transport media. For DFA use special collection kits with slides, fixative and swab/cytobrush. For amplified assays, use swab collection kit or urine collection kit provided by the laboratory.

COMMENT: Isolation specimens are stable for 48 hours at refrigerator temperature (4-8°C); DFA specimens are stable for 7 days at refrigerator temperature. Genital and urine specimens must be transported to the laboratory with in 4 days at 4°C.

TAT: 1 - 3 days.

CHANCROID

TEST: Gram stain examination of smear.

SPECIMEN: Exudates from lesions.

CONTAINER: Slide container maybe used. Write in comment section of Laboratory requisition form: Test for Chancroid

TAT: 1 - 2 days.

CHOLERA (Contact Laboratory)

COCCIDIOIDOMICOSIS

TEST: Isolation and identification of Coccidioides immitis. Complement fixation test and precipitin test are referred.

SPECIMEN: Sputum, body fluids, exudates, etc.; paired sera-acute and convalescent,
CONTAINER: Culture material in sputum container; submit sera in Diagnostic shipping container.

COMMENT: Coccidioidin skin test should be performed prior to requesting serologic tests.

TAT: 1 -2 weeks for serology. 4 weeks for final report on negative cultures.

DERMATOPHYTOSIS

TEST: Cultural or direct microscopic identification of dermatophytes from skin, hair or nail scrapings.

SPECIMEN: Contact laboratory for instructions.

CONTAINER: Contact laboratory.

COMMENT: Cultures are held for a minimum of four weeks before negative results are reported.

TAT: 1 -4 weeks.

DIPHTHERIA

TEST: Microscopic and cultural identification of Corynebacterium diphtheriae, toxigenicity testing.

SPECIMEN: Swab of posterior nares, throat swab of pseudomembrane and skin lesion cultures.

CONTAINER: Swab culture container.

COMMENT: Contact Laboratory. Specimen should be brought immediately to the Laboratory. Four days are usually required to rule out presence of C. diphtheriae. Toxigenicity test performed at State Health Department Laboratory.

TAT: 1 -5 days.

DYSENTERY, BACILLARY (See Shigellosis)

ENTEROBIASIS (Pinworm Infection)

TEST: Examination of anal impressions of eggs of E. vermicularis; identification of adult worms passed in feces.

SPECIMEN: Perianal paddle-tube specimens are best collected between 9:00 pm and midnight or early in the morning before defecation or bathing. Three consecutive daily specimens recommended.
CONTAINER: Special Pinworm containers are available, contact laboratory for collection kits.

COMMENT: Pinworm ova are very infectious; use care to prevent infecting those involved with handling specimens.

TAT: 1 day

FLOW CYTOMETRY (See Lymphocyte Immunophenotyping)

FOOD BORNE INFECTION OR INTOXICATION

TEST: Bacteriological analysis.

COMMENT: Contact Communicable Disease Office before submitting specimens to laboratory. All suspected food poisoning outbreaks are evaluated epidemiologically. Type of laboratory test is determined by symptoms, incubation period, etc. Specimens are taken and delivered to laboratory by Environmental Health personnel only.

TAT: 5 days -3 weeks.

GIARDIASIS (See Parasitic Infections)

GONOCOCCAL INFECTION

TEST: Microscopic, culture, confirmatory test for *Neisseria gonorrhoeae*. Susceptibility tests on request only. Contact laboratory. Antigen detection in genital specimens and urine by Amplification test methods.

SPECIMEN: Smear for male urethral discharge only; culture material. Genital swab and urine specimens for amplification test methods. Contact laboratory for collection kits.

CONTAINER: Gonococcus containers for either smear (male only) and/or culture are available.

COMMENT: For information regarding treatment regimens, contact STD Office at (209) 468-3845.

TAT: 2 -3 days (1 day for smear result).

HANSEN'S DISEASE (See Leprosy)

HEPATITIS A

TEST: Enzyme immunoassay (EIA) test for total antibody and IgM antibody.

SPECIMEN: Serum or plasma.

CONTAINER: Diagnostic shipping container.
COMMENT: Mark appropriate test on laboratory request form.

TAT: 1-5 days.

HEPATITIS B

TEST: Enzyme immunoassay (EIA) test for surface antigen, surface antibody, & core antibody (total and IgM), HBe antibody and antigen.

SPECIMEN: Plasma or serum.

CONTAINER: Diagnostic shipping container.

COMMENT: Mark appropriate Hepatitis B test(s) on laboratory request form.

TAT: 1-5 days.

HEPATITIS C

TEST: Enzyme immunoassay (EIA) for antibody to Hepatitis C virus (anti-HCV), Viral Load qualitative and quantitative assay.

SPECIMEN: Serum or plasma.

CONTAINER: Diagnostic shipping container.

COMMENT: Mark Hepatitis C on laboratory request form.

TAT: 5 days.

HIV INFECTION

TEST: Serum Enzyme immunoassay (EIA) -antibody screening, and an Indirect immunofluorescence (IFA) supplemental antibody test confirmation. Oral fluid EIA and Western Blot (WB) Confirmation test. Dried blot spot (DBS) EIA, confirmation provided by reference laboratory. Viral Load test, Quantitative.

SPECIMEN: Serum; EDTA plasma. Oral specimen and Dried Blood Spot (DBS) testing, contact laboratory for collection kit. Viral Load test required 1-2ml plasma, contact laboratory for collection kits.

CONTAINER: Diagnostic shipping container. (Transport via Diagnostic shipping container or zip lock bag via courier)
COMMENT: Initial EIA test repeated if reactive. IFA test performed on EIA specimens repeated if reactive. WB test performed on EIA specimens that are repeatedly reactive. Those specimens inconclusive a serum specimen is requested. Dried blood spot testing may be available contact laboratory for collection kits.

TAT: 1 -5 days.

HOOKWORM (See Parasitic Infection)

HYDATID DISEASE (Echinococcosis)

TEST: ELISA and Immunoblot assay from State Dept. of Health. Diagnosis is usually made by X-ray and serological tests.

SPECIMEN: Serum or plasma.

CONTAINER: Diagnostic shipping container.

COMMENT: Serological tests performed by CDC Laboratory.

TAT: 1 -4 weeks

INFANT BOTULISM

TEST: Detection of botulin toxin, and isolations of Clostridium botulinum.

SPECIMEN: Fecal specimen at least 25 gm (walnut size) collected in sterile container; vomitus, serum samples (2 ml or more); autopsy specimen’s serum & samples of intestinal contents from different levels collected in sterile containers.

CONTAINER: Use only sterile containers. Perishable specimens including serum and stool specimens should be refrigerated. Frozen specimens should be maintained frozen.

COMMENT: Notify Laboratory prior to collection. Tests performed at State Health Department Laboratory.

TAT: 1 -4 weeks.

INFLUENZA (See Viral Infection)

LEAD, POISONING

TEST: Blood Lead.
SPECIMEN: Whole Blood, collected in a Vacutainer containing EDTA or finger stick container with EDTA.

CONTAINER: Blood lead Vacutainer or finger stick kit.

COMMENT: Mix specimen by inverting 3-4 times.

TAT: 1 Week.

LEGIONNAIRE'S DISEASE

TEST: Identification of isolates. No examination of clinical or environmental specimens currently available.

SPECIMEN: Pure culture isolates of suspect Legionella.

CONTAINER: Non-carbohydrate containing tubed media. Submit with "Culture for Identification" request form.

COMMENT: Tests are performed by State Health Department Laboratory. Contact Laboratory for more information.

TAT: 1 -2 weeks.

LEPROSY (Hansen's Disease)

TEST: Microscopic examination for acid-fast bacilli. Contact Hansen’s Disease Regional Center in San Francisco, Los Angeles, or San Diego.

SPECIMEN: Smear from cutaneous lesions or mucous membrane. The preferred specimen is a punch biopsy collected from the active border of a lesion. Skin scrapings are of limited value.

CONTAINER: Slide container may be used. Fill in information on laboratory request form. Write in test desired "Smear for Leprosy".

COMMENT: Specimens for laboratory examination are best obtained by physicians experienced in the diagnosis and treatment of leprosy. Contact laboratory for information.

TAT: 1 day.

LYME DISEASE

TEST: Serological test for antibodies to Borrelia burgdorferi.

SPECIMEN: Serum. Acute and convalescent specimens preferred.

CONTAINER: Diagnostic shipping container.
COMMENT: Call PH Laboratory for availability of test. Service provided by the State Laboratory.

TAT: 1 week.

**LYMPHOCYTE IMMUNOPHENOTYPING** (Flow Cytometry) (T-Cell analysis)

TEST: T-Cell analysis by Flow Cytometry.

SPECIMEN: Whole blood in EDTA Vacutainer, transport and store at room temperature.

CONTAINER: Diagnostic shipping container.

COMMENT: Must reach laboratory within 24 hours. Absolute CD4 and CD8 T-cells/µl and Percentages.

TAT: 1 day.

**LYMPOGRANULOMA VENEREUM** (See Viral & Rickettsial Infection)

**MALARIA**

TEST: Microscopic examination of Giemsa-stained blood smears for presence of *Plasmodium* species.

SPECIMEN: Thick & thin blood smear or blood collected in EDTA. Submit two smears. Fix thin smear with methanol. For best results, blood should be drawn midway between paroxysms.

CONTAINER: Submit laboratory form with smear in slide container.

COMMENT: Indicate pertinent travel history. One negative result does not rule out the diagnosis of malaria.

TAT: 1-3 days.

**MEASLES** (See Viral & Rickettsial Infection)

**MENINGITIS** (See Public Health Laboratory Reference Services)

**MYCOTIC INFECTION**

TEST: Isolation and identification of the organisms causing Actinomycosis, Blastomycosis, Coccidioidomycosis, Histoplasmosis, Candidiasis, Nocardiosis.
SPECIMEN: Sputum - Collect only material brought up from the lung after a productive cough. A series of single early morning collections each shipped promptly after collection is generally preferred to a pooled 24 to 48 hour specimen. A specimen of 2 to 10 ml volume is adequate; containers should not be filled more than half full. Gastric lavage - Gastric specimens should be avoided if sputum can be collected. Since mycobacteria and pathogenic fungi die rapidly in gastric washings, such specimens should be tested within four hours after collection. Gastric specimens should be collected early in the morning on a fasting stomach. Only sterile water should be used for collection. If specimens must be mailed, neutralize at the time of collection with 10% sodium carbonate.

CONTAINER: Sputum, body fluids, pus and other material may be submitted in a sterile sputum container. For blood specimens - special containers for fungal serology test are available upon request; contact laboratory. Acute and convalescent blood specimens required. Some testing performed at State Health Department Laboratory.

COMMENT: Whereas Coccidioidin skin tests should be performed prior to requesting Serologic test; Histoplasmin skin tests should not be performed. Four weeks are necessary to rule out the presence of most fungi. If Histoplasmosis is suspected, 8 weeks may be required. If a particular species of fungi is suspected, it should be specified. A single negative culture does not rule out the diagnosis of a fungal infection.

TAT: 1 -4 weeks average.

PARASITIC INFECTION

TEST: Microscopic examination of preserved fecal material smears stained with trichrome and concentrated specimens for protozoan and helminth parasites. Identification of adult worm when passed. Serological tests.

SPECIMEN: Feces (preserved); sputum; urine, CSF; blood, or serum.

CONTAINER: Special collection kits are available which provide 2 containers each with a preservative for stool specimens. Collect feces in a clean container, such as bedpan, newspaper or waxed paper, do not collect in toilet. Place one portion of feces the size of a walnut in the bottle marked “formalin” and another portion of equal size in container marked “PVA”. Mix thoroughly so the feces are completely emulsified in the each of the fluids, use stick provided, use one stick per container. Replace caps securely on bottles, and write patient's name and date on each bottle. For reliable results these containers should be used. NOTE: Enteric bacteria and parasite containers are not interchangeable. Adult worms or proglottides should be placed in a container with saline, water or formalin. Serological tests (parasitological) are available for a select group of parasitic infections. Contact Laboratory for information, instructions and special containers.
COMMENT: A series of 3-4 fecal, sputum or urine specimens collected at 2-3 day intervals should be submitted. A single negative specimen is of little value. Do no administer barium, bismuth, Metamucil, castor oil, tetracycline therapy, or anti-amebic drugs within one week of specimen collection. If primary amebic meningocephalitis (PAM) is suspected, CSF must never be frozen and should remain at 20-30°C until processed. Contact Laboratory before taking specimen to ensure prompt examination of PAM specimens.

TAT: 1 -3 days.

PARATYPHOID FEVER (See Salmonellosis)

PINWORM (See Enterobiasis) ’-

PLAGUE (Contact Health Officer and Environmental Health Services Offices.)

TEST: Direct fluorescent antibody test on bubo aspirates and suspected bacterial isolates. Blood cultures are recommended. Serological tests on acute and convalescent specimens. Serological test of animals if directly associated with a confirmed case. RT-PCR may be performed on selected swab material submitted.

SPECIMEN: Bubo aspirates and blood culture isolates. Acute and convalescent blood specimens. In aspirating the node, irrigation with approximately 5 ml of sterile, non-bacteriostatic saline is recommended if the initial tap is dry.

CONTAINER: Aspirates and isolates should be placed in screw-capped containers and the container placed in a sealed plastic bag with the request slip attached to the bag. Sera are collected in standard blood collection tubes.

COMMENT: Arrangements should be made by telephone contact with the Public Health Laboratory as soon as a case of human plague is suspected. Laboratories should not attempt to isolate or identify possible Yersinia pestis isolates because of the attendant risks and because. Contact the Public Health for other test methods available. State Dept. of Health Laboratory may assist in diagnosis.

TAT: 1 -7 days.

POLIOMYELITIS (See Viral & Rickettsial Infection) PSITTACOSIS (See Viral & Rickettsial Infection) Q FEVER (See Viral & Rickettsial Infection)

RABIES

TEST: Fluorescent antibody test for rabies antigen.

SPECIMEN: Contact laboratory.

COMMENT: Contact laboratory. Examination performed if exposure of human or domestic animal has occurred.
TAT:  1 -4 days

RELAPSING FEVER

TEST:  Microscopic examination of blood film for *Borrelia recurrentis*.

SPECIMEN:  Thick and thin blood smear or whole blood collected in EDTA.

CONTAINER:  Diagnostic shipping containers.

TAT:  1 -3 days.

RICKETTSIAL FEVER, TICK-BORNE (See San Joaquin County Public Health Laboratory Viral Services Manual)

RINGWORM (See Dermatophytosis)

RUBELLA/RUBEOLA IMMUNITY

TEST:  Enzyme Immunoassay for IgG antibodies.

SPECIMEN:  Plasma or serum.

CONTAINER:  Diagnostic shipping container. M4 transport media for isolation specimens.

COMMENT:  See San Joaquin County Public Health Laboratory Viral Services Manual for isolation. If suspected current infection please contact Public Health Laboratory for specimen and test selection.

TAT:  1 -7 days.

SALMONELLOSIS (Including Typhoid and Paratyphoid Fever)

TEST:  Isolation and identification of Salmonella species.

SPECIMEN:  Feces (and urine for suspected typhoid patients).

CONTAINER:  Special transport media required for isolation from stool, Carey Blair Transport Media. Use of this container is highly recommended. Collect feces in a clean container, such as a bedpan, newspaper or waxed paper; do not collect in toilet water. Place portion of feces about the size of a walnut in specimen bottle and mix thoroughly with sticks provided. Do not overfill container, see line on Carey Blair transport media container. Cap tightly and write patient's name and date on the container. NOTE: Parasite containers are not interchangeable. Urine is transported in a screw cap centrifuge tube. Contact laboratory for collection kits for urine and/or stool.

COMMENT:  If case is related to food consumed at a public food establishment, please contact Environmental Health Services Office. If specimen is a “contact” or “test of cure” please indicate such on Laboratory requisition form.
TAT: 2 -7 days.

**SCABIES** (Contact Public Health Laboratory)

**SHIGELLOSIS** (Bacillary Dysentery)

**TEST:** Isolation and identification of *Shigella* species.

**SPECIMEN:** Feces, rectal swabs.

**CONTAINER:** See Salmonellosis. NOTE: Enteric bacteria and Parasite containers are not interchangeable.

**COMMENT:** If case is related to food consumed at a public food establishment, please contact Environmental Health Services Office. If specimen is a “contact” or “test of cure” please indicate such on laboratory requisition form.

TAT: 2 -7 days

**STREPTOCOCCAL INFECTION**

**TEST:** Isolation and identification of beta hemolytic streptococci.

**SPECIMEN:** Throat culture isolation or culture for identification.

**CONTAINER:** Culture mailing container. Specimen collection at PH Clinic with prior arrangement.

TAT: 1 -3 days.

**SYPHILIS**

**TEST:** Serological tests for syphilis. RPR Circle Card Test -qualitative and quantitative; Confirmation with an approved Treponema test; Darkfield; VDRL is performed on spinal fluid.

**SPECIMEN:** serum; spinal fluid for serology tests. Exudates from base of cleansed chancre for Darkfield examination. Clean superficial debris from chancre before collection. Care should be taken when collecting exudate since it can be infectious.

**CONTAINER:** Blood, serum, spinal fluid may be submitted in Diagnostic shipping container. For information regarding other tests and containers contact the laboratory. Darkfield examination is only offered through Public Health Services STD Clinic.
COMMENT: Since serological tests are often not positive for 14-21 days after contact, the Darkfield may be the only way to establish diagnosis immediately after infection. For information regarding treatment regimens, contact STD Office at 468-3845.

TAT: < 1 hr. -7 days.

**T-CELL ANALYSIS** (See Lymphocyte Immunophenotyping)

**TOXOPLASMOSIS**

TEST: Serologic test for *Toxoplasma gondii*. Indirect Fluorescent Antibody (IFA).

SPECIMEN: Serum.

CONTAINER: Diagnostic shipping containers are available upon request contact Laboratory.

COMMENT: Acute and convalescent specimens are required for proper diagnosis of cases.

TAT: 1 -7 days.

**TRICHINOSIS**

TEST: Serologic tests (referred). "

SPECIMEN: Serum.

CONTAINER: Diagnostic shipping containers are available upon request, contact Laboratory.

COMMENT: Contact Laboratory.

TAT: 2 -4 weeks.

**TRICHOMONIASIS**

TEST: Wet mount, microscopic examination.

SPECIMEN: Vaginal/Cervical Exudate. Or urine.

CONTAINER: Tube dropper or urine container.

COMMENT: Offered to STD Clinic only.

TAT: < 1 hr.
TUBERCULOSIS

TEST: Microscopic examination for acid-fast bacilli. Isolation and identification of *Mycobacterium tuberculosis* or other species of mycobacteria (Runyon Groups I-IV) Rapid liquid methods. Nucleic Acid Probes. Drug susceptibility test (isoniazid, streptomycin, ethambutol, rifampin and pyrazinamide) -by request.

SPECIMEN: Sputum; exudates, blood, body fluids (as much fluid as possible should be delivered) and tissue; tracheal or bronchial washing; urine (first AM voided).

CONTAINER: Diagnostic shipping container. Normally sterile body fluids should be placed in sterile container. Yellow top Vacutainer for Blood collection.

COMMENT: Result of the microscopic examination performed initially on all specimens is sent as a preliminary report. Cultural results are reported within 8 weeks thereafter. Specimens yielding acid-fast bacilli on culture are identified by routine biochemical test and DNA probe technologies as *M. tuberculosis* or other species of mycobacteria. Drug susceptibility tests are available upon request (primary drugs; isoniazid, streptomycin, ethambutol, rifampin and pyrazinamide). Secondary drugs for resistant organisms are tested at the State Health Department Laboratory. Other species of Mycobacteria may be responsible for extra-pulmonary disease. Urinary tract tuberculosis should be suspected whenever pyuria occurs without bacteriuria or unexplained hematuria or proteinuria. Maximum yield from urine requires three specimens.

TAT: Smears: daily. Culture: 8 weeks for final negative result.

TULAREMIA

TEST: Isolation and identification of *Francisella tularensis* from clinical material. Direct fluorescent antibody test on tissue or bacterial isolates. Real time PCR may be performed on selected material submitted.

SPECIMENS: Lymphoid tissue, aspirates, ulcer swabs, blood and other tissue. Bronchial/tracheal wash or sputum if pneumonic tularemia is suspected.

CONTAINER: Sterile container. Contact Public Health Laboratory prior to submission.

COMMENT: Contact Public Health Laboratory prior to submission of clinical specimens.

TAT: 1-7 days.

TYPHOID FEVER (*Salmonella typhi*) (See Salmonellosis)

TYPHUS FEVER (Serological test performed at State Health Department Laboratory -See San Joaquin County Public Health Laboratory Viral Services Manual).
UNDULANT FEVER (See Brucellosis)

VIBRIO INFECTIONS

TEST: Culture of stool material.

SPECIMEN: Stool specimen.

CONTAINER: Enteric Collection Kit, Carey Blain with indicator. Indicate on test request form "Culture for Vibrio species".

COMMENT: In U.S., implicated foods are oysters, crab, lobster, and seafood cocktail.

TAT: 2-7 days.

VIRAL AND RICKETTSIAL INFECTION

TEST: Serologic tests: isolation and identification procedures; fluorescent antibody procedures, direct fluorescent antibody tests and PCR methods.

SPECIMEN: Paired sera- (acute and convalescent); stool, throat washing, spinal fluid; vesicle fluid or skin scraping; urine, biopsy and autopsy material.


COMMENT: Virus antibody tests are determined by "clinical findings: and "disease suspected": as documented on report form submitted with specimen. Some tests are performed at the State Laboratory.

Upper Respiratory (patients less than 10 years old are also screened for Respiratory Syncytial Virus and Para-influenza types 1-3)

Influenza A  Influenza B  Adenovirus  Mycoplasma  Herpesvirus  Q-Fever

Central Nervous System
Mumps, Rubeola, Rubella  Polio Types 1-3  Equine Encephalitides  (May through October)  Enterovirus

Venereal
Herpes  LGV  Chlamydia

Rash
Rubella, Rubeola, Varicella  Adenovirus, Enterovirus, Herpes

Congenital (Torch)
Toxoplasmosis  CMV, Herpes
For information regarding further and availability of tests, instructions for collection of specimens, containers, etc., refer to the San Joaquin County Public Health Laboratory Viral Services Manual or call Laboratory for information.

Specimens for tests performed at the State Health Department Laboratory must be submitted through the local Public Health Laboratory.

TAT: 1 day – 4 weeks.

**WHOOPING COUGH** (pertussis)

**TEST:** Identification of *Bordetella pertussis*.

**SPECIMEN:** Nasopharyngeal swabs collected during catarrhal and early paroxysmal stages. Immobilize patient's head and gently insert swab to posterior nares and leave there for 15-30 seconds. Nasopharyngeal specimen is preferred to bronchial washings or transtracheal aspirates.

**CONTAINER:** Media available to clinical laboratories - Call for information.

**COMMENT:** Cultures are screened for *Bordetella pertussis* only unless otherwise requested. Allow at least one week for isolation and identification.

TAT: 2 - 7 days.

**YERSINIA**

**TEST:** Isolation and identification of *Yersinia sp.* excluding *Yersinia pestis*.

**SPECIMEN:** Feces collected using Carey Blair collection kit with indicator or rectal swab.

**CONTAINER:** See Salmonellosis.

**COMMENT:** On laboratory request form write in OTHER TEST/COMMENT: "Yersinia Isolation".

TAT: 1 - 7 days.
STATE HEALTH DEPARTMENT AND CDC SERVICES

Specimens for the State Microbial Diseases Laboratory and CDC must be submitted through a local Public Health Laboratory. Please allow 2-4 weeks for results. The State Laboratory and CDC generally require a clinical history before they will accept a specimen for testing. Currently there is no charge for these services.

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>METHOD</th>
<th>LABORATORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amebiasis</td>
<td>Indirect Hemagglutination</td>
<td>CDC</td>
</tr>
<tr>
<td>Anthrax(^3)</td>
<td>Contact SJCPH Lab, confirmation with phage/FA</td>
<td>State</td>
</tr>
<tr>
<td>Aspergillosis</td>
<td>Contact PH Laboratory</td>
<td>CDC</td>
</tr>
<tr>
<td>Babesiasis</td>
<td>Indirect Fluorescent Antibody</td>
<td>CDC</td>
</tr>
<tr>
<td>Blastomycosis</td>
<td>Complement Fixation, Immunodiffusion</td>
<td>CDC</td>
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<tr>
<td>Botulinum Antitoxin</td>
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<tr>
<td>Brucella(^3)</td>
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<td>CDC</td>
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<tr>
<td>Candidiasis</td>
<td>Immunodiffusion, Latex Agglutination, ELISA</td>
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<td>Chagas Disease</td>
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<tr>
<td>Cholera</td>
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<tr>
<td>Cryptococcosis</td>
<td>Latex Agglutination</td>
<td>CDC</td>
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<tr>
<td>Cysticercosis(^2)</td>
<td>Immunoblot</td>
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<tr>
<td>Diphtherial(^1)</td>
<td>Indirect Hemagglutination</td>
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<td>Echinococcosis</td>
<td>ELISA</td>
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<tr>
<td></td>
<td>Immunoblot</td>
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<tr>
<td>Filariasis(^1)</td>
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<td>Histoplasmosis</td>
<td>Complement Fixation</td>
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<td>Leishmaniasis</td>
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<tr>
<td></td>
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<td>Microscopic Agglutination</td>
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<td></td>
<td>ELISA IgM</td>
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<td>ELISA, Western Blot</td>
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<td>Laboratory</td>
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<tr>
<td>Melioidosis/glanders(^3)</td>
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<td>State</td>
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<td>Paracoccidioidomycosis</td>
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<td>Paragonimiasis</td>
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<tr>
<td>Pertussis</td>
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<td>Plague(^3)</td>
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<td>State/CDC</td>
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<td>CDC</td>
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<tr>
<td>Yersiniosis(^1)</td>
<td>Contact PH Laboratory</td>
<td>State</td>
</tr>
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</table>

**FOOTNOTES:**

1. No longer routine service. Requires prior approval by CDC.
2. Both serum and cerebral spinal fluid are desirable.
3. Organism Potential Bioterrorism Agent. Contact Local PH Laboratory As Soon As Possible.

**INFORMATION REQUIRED FOR SEROLOGIC TESTING AT THE CENTERS FOR DISEASE CONTROL.** Items 1-8 are required. If pertinent, information requested in items 9-11 should also be provided.

1. Name  
2. Sex  
3. Birthrate  
4. Date Specimen Taken (mo/dy/yr)  
5. Date of Onset (mo/dy/yr illness started. If uncertain, give approximate date)  
6. Clinical Diagnosis (If none made, indicate why test is required)  
7. Associated Illness (Such as cancer, arthritis, etc., or give major symptoms)  
8. Outcome: (Fatal?)  
9. Previous laboratory results or other clinical information  
10. Treatment, if relevant  
11. Epidemiological data, if relevant (List places of travel or residence, or animal contacts)