



COUNTY OF LOS ANGELES

Public Health

Public Health Laboratories



2020 Catalog of Laboratory Tests

August 26th, 2020

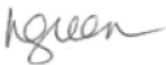
Dear Valued Client,

For over eight decades, the Los Angeles County Public Health Laboratories has been responsible for supporting the diagnostic, and environmental testing needs of Los Angeles County. Throughout the years, the laboratory has faced many challenges but has always managed to be resourceful and rapidly respond to new infectious diseases and public health threats.

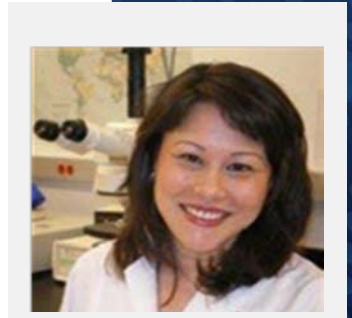
As we enter a new decade, we are pleased to provide you with a redesigned Catalog of Laboratory Tests with the latest information on tests performed by our Laboratory Service Units. It also provides a brief overview of the laboratory, contact information, and procedures for the submission, collection, and handling of specimens. Also, included in the appendix is a list of specimen collection supplies provided by the PHL. The test request form can be found at the Public Health Laboratories website.

On behalf of the dedicated employees of the largest local public health laboratory in California, we look forward to our continued commitment in helping you provide the best possible diagnostic and environmental services to meet the needs of the community that you serve tomorrow and for the years to come.

Sincerely,



Nicole M. Green, PhD, D(ABMM)
Laboratory Director



LOS ANGELES COUNTY
PUBLIC HEALTH LABORATORIES
12750 Erickson Avenue
Downey, California 90242
Phone: (562) 658-1330
Fax: (562) 401-5999
www.publichealth.lacounty.gov/lab

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History

HISTORY

WHERE WE BEGAN

The County's humble beginnings in health care began in 1878, when it opened a 100-bed hospital and County Poor Farm for the county's indigent. In 1903, The Los Angeles County Public Health Department was founded.

In April 1915, the Board of Supervisors appointed John Larabee Pomeroy as the county's first health officer. The health department's official headquarters were provided in the basement of the County Court House on North Broadway, Los Angeles.

As the department grew, the administrative offices were moved to the old Alhambra Hotel, north of the Hall of Justice. However, when the East Los Angeles Health Center was completed in 1929, four of the Department's seven bureaus were moved there due to the over-crowding in the Hall of Justice. One of those four bureaus was the Bureau of Laboratories which consisted of three testing units: Bacteriology, Serology and Chemistry. Dr. Raymond. V. Stone was Director of the Bureau of Laboratories.

In 1942, offices in a county building located at 808 North Spring Street, Los Angeles enabled the entire staff to be housed together. The Scope of Laboratory Services in 1942 included the following examinations of specimens for the diagnosis and control of communicable diseases:

Blood for syphilis serology; blood for agglutination tests for typhoid, paratyphoid, undulant fever, tularemia, typhus, Rocky Mountain spotted fever, and Weil's Disease; blood smears for malaria and relapsing fever; chancre material in capillary tube, for suspected syphilis (Dark field); urine and feces examination for the typhoid-paratyphoid-dysentery-cholera group of organisms; feces for intestinal parasites (including amebiasis); sputum for tubercle bacilli (smear, concentration, culture and coccidioides organisms; smears for gonococci and Vincent's organisms, purulent ophthalmia; cultures for diphtheria bacilli and virulence tests; Actinomyces exudates for smear and culture, Anthrax: smear, culture and animal inoculation; Suspected glanders exudate; smears for suspected Leprosy; material for suspected Plague and Rabies (Human autopsy or animal material); exam for suspected septic sore throat; material for culturing and smear, impetigo; food samples for suspected botulism; food-poisonings and food infections.

HISTORY

The Los Angeles County Public Health Laboratory moved to 241 North Figueroa Street in 1950. In 1963, it merged with the City of Los Angeles Public Health Laboratory and moved into the quarters where the Los Angeles City Laboratory was operating.

When more space was needed temporary quarters were provided in the Old Hall of Records at 220 North Broadway, Los Angeles. The Lab Director was Dr. Carl A. Lawrence.

In April 1971, the PHL moved to the new County of Los Angeles-Health Department Administrative Headquarters at 313 North Figueroa Street, Los Angeles. The PHL occupied the 11th and 12th floor of the new headquarters. The Lab Director was Dr. Richard Barnes.

In the Fall of 1973, the county environmental chemistry unit joined the PHL. However, in July 1990, that part of the laboratory was transferred to the Agriculture Weights and Measures Department in the county.

In 2007, the PHL had outgrown its high-rise space in downtown Los Angeles. Under the leadership of Dr. Sydney M. Harvey, the laboratory and its 130 employees were relocated, 13 miles southeast of downtown Los Angeles to the former site of the County Poor Farm, now called Rancho Los Amigos-South Campus.

The PHL's current address is 12750 Erickson Avenue, Downey, CA

YEAR	LABORATORY DIRECTOR
1936-1951	Raymond V. Stone, D.V.M.
1952	Elaine De Boynton
1953-1969	Carl A. Lawrence, Ph.D.
1970	Elaine De Boynton
1970-1990	Richard Barnes, Ph.D.
1991-1994	Marlene F. Rafter
1994-2005	Sydney M. Harvey, Ph.D.
2005-2010	Sohair F. Sabet, Ph.D.
2010-2011	Mary Beth Duke
2011-2013	J. Michael Janda, Ph.D.
2013-Present	Nicole M. Green, Ph.D.



General Information

THE LABORATORY TODAY

The Los Angeles County Public Health Laboratories (PHL) serve as the reference laboratory for the County of Los Angeles and City of Pasadena. This represents a population of over 10.2 million residents and 43 million annual visitors divided into 8 service planning areas. Our LRN catchment area includes the counties of Los Angeles, Orange, Ventura, Santa Barbara, and San Luis Obispo during emergency situations.

PHL functions as a diagnostic and reference laboratory to test epidemiologically significant specimens with potential public health implications. Our laboratory performs reference testing for laboratories that do not have the capability to fully identify disease agents of public health significance, aids in the diagnosis of unusual pathogens, and confirms atypical tests results. We serve more than 100 hospitals, and 14 public health clinics to provide primary diagnostic testing, surveillance testing, and outbreak response.

In addition to testing, PHL oversees Non-Diagnostic General Health Assessment licensure and provides quality assurance and safety recommendations. Our laboratory is an approved training lab for California Public Health Microbiology training. Importantly, our laboratory works closely with partner public health programs and clinics to institute new test procedures.



MISSION

To improve and protect public health through the provision of information from timely, cost effective, and sophisticated testing.

VISION

The Los Angeles County Public Health Laboratory is recognized nationally as a premier public health laboratory.

CORE VALUES

Our laboratory has been built on the core value of SERVICE. Our greatest asset is our staff that delivers and ensures world-class analytical testing.

“At the Los Angeles County Public Health Laboratory, we strive to take personal responsibility to live our service values on a daily basis and dedicate ourselves to providing the best possible testing services to our community.”

OUR SERVICE VALUES

Satisfaction

We respond to our communities needs and provide the highest level of customer service as we hold ourselves accountable for our performance

Efficiency

We constantly work to identify areas for improvement regarding laboratory finance, diagnostic services, and environmentally-sound testing

Results and Accountability

We deliver accurate results in a timely manner and have exceptionally high standards of laboratory quality control and assurance

Value

We offer affordable, state-of-the -art, reference diagnostic services with outreach to generate new revenue streams

Innovation and Continuous Learning

We provide current training information and educational opportunities to innovate and promote intellectual advancement within the profession

Collaboration and Partnership

We seek and engage opportunities to meet, communicate, network, and partner with CDCP programs and other public agencies as well as the clinical community

Excellence

We strive to be a center of expertise for the detection of agents of public health importance and serve as a model for others to emulate

CERTIFICATIONS AND ACCREDITATIONS

- California Approved Public Health Laboratory #335637
- CLIA Certified High Complexity Laboratory #05D1066369
- CDPH Certified Public Health Microbiologist Training Program # PHMTP 003
- Environmental Laboratory Accreditation Program (ELAP) #1398
- FERN (Food Emergency Response Network)
- California Department of Food and Agriculture (CDFA)
- WHO Influenza Laboratory
- CDPH RLN Laboratory
- CDC/APHL Advanced Status LRN-B Laboratory
- CDC Level 2 LRN-C Laboratory
- CDC/APHIS Select Agent Program #C20170426-1899
- Biowatch Laboratory
- CDC PulseNET WGS
- CDC CaliciNET
- CDC Legionella ELITE
- CDC ARLN (Antibiotic Resistance Laboratory Network)
- CDC GISP (Gonorrhea Isolate Surveillance Project)
- CDC NARMS (National Antibiotic Monitoring Program)

LABORATORY DIRECTORY

12750 Erickson Avenue
Downey, CA 90242
562-658-1300 Phone
562-401-5999 Fax

<http://publichealth.lacounty.gov/lab/>

Business Hours
Monday – Friday
8:00 AM – 5:00 PM
Saturday
8:00 AM – 4:30 PM

LABORATORY ADMINISTRATION

Nicole Green, Ph.D., D(ABMM), Laboratory Director	(562) 658 - 1330
Peera Hemarajata, M.D., PhD., D(ABMM), Asst. Director	(562) 658 - 1330
Maureen Quraishi, Senior Staff Analyst, Special Projects	(562) 658 - 1300
Vacant, Laboratory Manager	(562) 658 - 1300
Elizabeth Cordero, Quality Control Coordinator	(562) 658 - 1344
Leo Busa, Finance and Client Services Director	(562) 658 - 1353

LABORATORY SUPPORT SERVICES

Laboratory Information Systems Help Desk	(562) 658 - 1340
Non-diagnostic General Health Assessment Licensing	(562) 658 - 1370
Laboratory Supply Warehouse	(562) 658 - 1446
Specimen Receiving/Courier Scheduling	(562) 658 - 1460

DIAGNOSTIC SERVICES

Lee Borenstein, Ph.D., D(ABMM), Public Health Microbiology Supervisor II
Serology, Virology, & Molecular Diagnostics Units
(562) 658-1493

David Jensen, M(ASCP)^{CM} Public Health Microbiology Supervisor II
Bacteriology, Parasitology, & Environmental Microbiology Units
(562) 658-1488

Hector Rivas, MPH, Public Health Microbiology Supervisor II
Mycobacteriology, Mycology, & Molecular Epidemiology Units
(562) 658-1351

Robert Tran, Ph.D., Public Health Microbiology Supervisor II
Blood Lead, Biological & Chemical Terrorism Response Units
(562) 658-1361

EMERGENCY RESPONSE AND PREPAREDNESS

- **BIOTERRORISM RESPONSE UNIT**
Detection and identification by molecular and conventional methods
 - Avian Flu
 - *Bacillus anthracis*
 - *Brucella species*
 - *Burkholderia pseudomallei* and *Burkholderia mallei*
 - *Clostridium botulinum*
 - *Coxiella burnetii*
 - Ebola
 - *Francisella tularensis*
 - MERS
 - Ricin (environmental testing only)
 - *Rickettsia*
 - Serology
 - *Brucella*
 - *Francisella*
 - *Yersinia*
 - Vesicular rash/smallpox
 - *Yersinia pestis*

If any of the above organisms or conditions is suspected please contact the laboratory for telephone consultation.

- **CHEMICAL TERRORISM RESPONSE UNIT**
This unit tests urine and blood for analytes related to chemical agent exposure.
- **EMERGENCY RESPONSE CONTACT INFORMATION**

Regular Business Hours—Monday thru Friday 8:00 AM – 5:00 PM
Laboratory Administration (562) 658-1330 (1300)

After hours including weekends and holidays, call the County Operator at (213) 974–1234 and request to be connected to the laboratory technical consultant on call.

SUPPORT SERVICES

CLIENT SERVICES

The Public Health Laboratory aims to continually deliver the best possible standard of services to our clients. Our staff strives to provide our clients with professional, high quality, and timely service. We are available to answer questions and resolve problems that our clients may have. Our hours of coverage are from 8:00 a.m. to 5:00 p.m. Monday through Friday, and by special arrangement on weekends. The Public Health Laboratory clerical staff is available to answer all non-technical questions or to forward your technical questions to the appropriate staff.

CLINICAL CONSULTATION

The Laboratory Director is available to answer questions regarding test procedures and interpretation of results.

PUBLIC HEALTH MICROBIOLOGIST TRAINING PROGRAM

Los Angeles County Public Health Laboratory has been approved as a training institution for Public Health Microbiologist per regulations specified at Title 17, CCR, §1079 and 1080 Public Health Training Program Standards.

QUALITY ASSESSMENT

The Los Angeles County Public Health Laboratory (PHL) adheres to a Quality Assessment Program that focuses on methods and standards that continuously monitor and improve the level of diagnostic testing services provided. The Los Angeles County Public Health Laboratory is a leader in the field of diagnostic laboratory testing. Our goal is to provide the foremost professional service by offering tests of high quality that effectively meet and exceed the needs of the physicians and patients who rely on our service.

The PHL Quality Assessment Program incorporates policies and practices to ensure that diagnostic testing results are reported in a timely manner and are monitored and verified to detect, control, and prevent the occurrence of errors.

Quality control of all media, reagents and equipment is performed for all test procedures. Standards and/or test controls ensure accuracy, reliability and reproducibility of test results.

The PHL subscribes to CLIA approved proficiency testing programs for regulated analytes and, also implements internal proficiency testing as means of monitoring the quality and accuracy of test performance.

SUPPORT SERVICES

NON-DIAGNOSTIC GENERAL HEALTH ASSESSMENT

The Non-diagnostic General Health Assessment Office was established in 1991 to implement enforcement of Chapter 195, §1244, 1244.1, 1244.3 and 1244.4 of the California Business and Professions Code. This statute governs programs providing waived bioanalytical screening tests to asymptomatic individuals for a non-infectious chronic health condition. Entities conducting a program within the County of Los Angeles must file an application form and all required documentation to the County NGHA office at least thirty days prior to program operation.

Examples of NGHA programs:

- A cholesterol screening program held at a shopping mall and sponsored by a hospital, in which blood is collected by fingerstick and tested onsite using a portable machine.
- Glucose testing performed at a pharmacy in which blood is collected by fingerstick and tested onsite using a portable analyzer.
- Examination of stool for occult blood at a senior citizens' community center.

Programs that are not classified as NGHA programs:

- Collection of blood by venipuncture at a shopping mall which is subsequently tested for glucose (or other components) at a licensed medical laboratory.
- Blood pressure screening
- Estimation of body fat content

Important Forms and Documents:

NGHA Application

<http://publichealth.lacounty.gov/lab/ngha/nghaapnew.pdf>

NGHA Renewal Application

<http://publichealth.lacounty.gov/lab/ngha/nghaap.pdf>

NGHA Guidelines for Policy and Procedures Manual Preparation

<http://publichealth.lacounty.gov/lab/ngha/nghaguide.pdf>

SUPPORT SERVICES

SPECIMEN TRANSPORT

Specimens are delivered to the laboratory by private courier service. Submission requirements are listed in the test information section including instructions on packaging, temperature requirements for storage and transportation. Couriers are trained in bio-hazardous materials handling and spill clean-up, proper specimen handling procedures, labeling of containers, and transporting specimens per specified temperature requirements.

SPECIMEN TRACKING

A packing slip must be affixed to each bag of specimens submitted to the Public Health Laboratory. Central Accessioning staff compares the contents of the bag to the items listed on the packing slip to ensure that all items sent are received by the laboratory. All items received by the laboratory are scanned in the specimen tracking system.

REPORTING OF TEST RESULTS

Specimens are processed upon receipt and results are reported to the submitter when testing is completed. Turnaround times vary with the amount of time required to make the various test determinations.

Urgent reports are telephoned when the results are available. Other reports are electronically transmitted, faxed or mailed as submitter requests.

SUPPLIES

Specimen collection kits, supplied by the Public Health Laboratory, including test requisition forms and biohazard specimen bags, may be obtained by submitting a Containers Supply Request Form.

http://www.publichealth.lacounty.gov/lab/docs/Laboratory_Supply_Request_Form.pdf

SPECIMEN TRANSPORT KITS & CONTAINERS

COLLECTION, STORAGE & TRANSPORT

Collection, storage and transport of specimens are critical variables that affect the accuracy and usefulness of diagnostic test results. The pre-analytical phase of specimen management is initiated with the laboratory test request and includes appropriate selection, collection, handling, and transport to laboratory of specimen for diagnostic testing.

Careful selection and appropriate collection and handling of specimens provide test results that are meaningful to patient management. Criteria that profile specimen acceptability and rejection are available in the PHL test catalog under “Guidelines for Specimen Collection and Transport” by department or by specific type of test procedure requested. When appropriate, specific patient handling requirements are provided to assist the provider with specimen collection. Specimens received by the laboratory that do not meet specified testing criteria, are excluded from testing.

Test requests, written or electronic, must be submitted to the laboratory at the time specimen is received and must contain the minimal required information for the test to be performed. The test order must be appropriate to the type of specimen collected. Missing, incorrect, or discrepant information on a test request or specimen may result in an interruption or exclusion from the testing process.

Refer to specific testing requirements for information on collection, handling, and transport of specimens.

TEST REQUISITION, SPECIMEN LABELING & PACKAGING REQUIREMENTS

TEST REQUISITION FORMS

A test requisition form is the authorization that enables the laboratory to perform specified procedures. This form must accompany each specimen unless the submitting facility is electronically linked to the Laboratory. The following information must be provided:

- Patient full name or another unique identifier
- Patient sex
- Patient date of birth or age
- Date of specimen collection
- Type and/or source of specimen
- Complete submitter information (name, address, phone #)
- Test(s) requested
- Complete name of ordering clinician

Additional information such as disease suspected, and / or symptoms, may be required for some specific tests.

SPECIMEN LABELING & PACKAGING REQUIREMENTS

Specimen container lids must be tightly closed to prevent leakage of specimen. All primary specimen containers must be clearly labeled with at least two unique identifiers such as the patient full name along with other unique identifier and date the specimen was collected. Place the specimen inside the pouch of the biohazard container and seal completely. Place the Public Health Lab test requisition form or the SUNQUEST label in the *outside* pocket of the biohazard bag. Please wear gloves while handling specimens.

SPECIAL TESTS

Any questions regarding special tests not listed in the test catalog may be referred to the Laboratory Director.

TESTING POLICIES

UNACCEPTABLE SPECIMENS

Examination of specimens with ambiguous patient or submitter identity can result in liability for the laboratory and the patient.

Specimens may be rejected for the following reasons and not limited to:

- Patient name or file number discrepancy between specimen label and test requisition
- No patient name or other unique identifier on specimen
- Specimen is too old when received
- Lack of specimen in container or insufficient quantity of specimen
- Expiration date of the transport medium has been exceeded
- Specimen collected in an inappropriate preservative or transport medium
- Inappropriate storage or transport conditions

Deviation from the test specific requirements listed in the test information section will lead to specimen rejection.

The laboratory staff will make every effort to obtain information missing from the test requisition and/or to correct ordering errors. The specimens will be processed, and results held until information needed is acquired.

The laboratory will promptly phone or fax the submitter regarding unsatisfactory specimens.

Unsatisfactory specimens will be stored refrigerated or as required by testing unit specific protocol.

Unsatisfactory specimens will be disposed of as bio-hazardous waste after 14 days from receipt.

ANIMAL SPECIMENS

Except for rabies and plague surveillance testing animal specimens are generally not acceptable for laboratory testing and will not be tested.



General Test Listing By Department



Bacteriology



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Aerobic Bacterial Culture, Routine and Special

Other Name(s)	Aerobe
LIMS Code	ABCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	To be determined
Minimum Volume Required	To be determined
Storage/Transport Conditions	To be determined
Transport Medium	
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	To be determined
Test Methodology	To be determined
Turnaround Time	To be determined
Interferences & Limitations	To be determined
Additional Information	None
Reference Range	By report
CPT Code(s)	87070
LOINC Code	634-6



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Aerobic Bacterial Identification

Other Name(s)	Aerobe
LIMS Code	ABI
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	To be determined
Minimum Volume Required	To be determined
Storage/Transport Conditions	To be determined
Transport Medium	
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	To be determined
Test Methodology	To be determined
Turnaround Time	30 days
Interferences & Limitations	To be determined
Additional Information	None
Reference Range	By report
CPT Code(s)	87077
LOINC Code	6463-4



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Anaerobic Bacterial Culture, Routine and Special

Other Name(s)	Anaerobe
LIMS Code	ANCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	To be determined
Minimum Volume Required	To be determined
Storage/Transport Conditions	To be determined
Transport Medium	
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	To be determined
Test Methodology	To be determined
Turnaround Time	To be determined
Interferences & Limitations	Transport method must be suitable for anaerobic conditions or organisms may not be viable for testing.
Additional Information	Please indicate suspected organism(s) when submitting specimen.
Reference Range	By report
CPT Code(s)	87075
LOINC Code	635-3



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Anaerobic Bacterial Identification

Other Name(s)	Anaerobe
LIMS Code	ANBI
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Anaerobic bacteria from clinically relevant sources, pure culture isolate in anaerobic transport medium (e.g., Chopped Meat Glucose Broth). Prior approval from laboratory required for other sample/specimen types. Specimen from respiratory, vaginal, and fecal sources are not acceptable.
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Store anaerobically. Specimen stored at room temperature should be shipped at room temperature Frozen specimen should be shipped on dry ice
Transport Medium	Pure culture isolate in chopped meat glucose broth, thioglycolate broth or frozen in TSB plus glycerol
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship specimen Monday -Thursday overnight to avoid weekend deliveries, as an etiologic agent.
Test Methodology	16S Sequencing, MALDI-TOF, Phenotypic Testing
Turnaround Time	30 days
Interferences & Limitations	Transport method must be suitable for anaerobic conditions or organisms may not be viable for testing.
Additional Information	Please indicate suspected organism(s) when submitting specimen.
Reference Range	By report
CPT Code(s)	87076
LOINC Code	20878-5



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***Bordetella* species, Culture and Identification**

Other Name(s)	Whooping cough, <i>B. pertussis</i> , <i>B. parapertussis</i> , <i>B. holmesii</i> , <i>B. bronchiseptica</i> ,
LIMS Code	BPC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Nasopharyngeal (NP) swabs and aspirates; calcium alginate and cotton swabs are not acceptable
Minimum Volume Required	0.5 mL aspirate
Storage/Transport Conditions	Nasopharyngeal (NP) swabs should be collected on Dacron (polyester), rayon or nylon. Specimens should be kept refrigerated. Use plastic/glass screw-cap, leak-proof vials.
Transport Medium	Regan-Lowe transport medium is recommended for specimens. Amies Charcoal transports are acceptable, but may decrease the probability of isolation.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Swabs in transport or isolates should be shipped refrigerated (2°-8°C) as soon as possible, between 24-48 hours. Aspirates can be shipped with ice packs or frozen (-20°C or lower). Frozen isolates should be sent on dry ice. Please contact the laboratory by email or phone before shipping.
Test Methodology	Culture
Turnaround Time	2 weeks
Interferences & Limitations	Prior antibiotic treatment will adversely affect results. Patients coughing more than two weeks will likely not be culture positive.
Additional Information	None
Reference Range	By report
CPT Code(s)	87081, 87077
LOINC Code	6317-2



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Campylobacter, Culture and Identification

Other Name(s)	Campy
LIMS Code	CAMPY
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Fresh stool; Rectal swab
Minimum Volume Required	5 ml of diarrheal stool, 1 g of material or a walnut-sized portion of stool
Storage/Transport Conditions	Store and transport stool between 2-8°C. Specimens should NOT be frozen.
Transport Medium	Para-Pak C&S container (modified Cary-Blair transport media) NOTE: Do not fill commercial transport vials above indicator line. Overfilling of transport vial will be rejected.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Stools in transport media should be shipped at 2-8°C and within 24 hours. Please contact the laboratory by email or phone before shipping.
Test Methodology	Conventional biochemicals
Turnaround Time	4 days for negative result
Interferences & Limitations	Specimens should be collected before antibiotic therapy is initiated.
Additional Information	If the initial stool culture is negative, then additional stool samples may be submitted for testing provided the patient collects them from different defecations on successive days.
Reference Range	No <i>Campylobacter</i> isolated
CPT Code(s)	87046, 87077
LOINC Code	6332-1



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Carbapenem-resistant *Acinetobacter*

Other Name(s)	CR- <i>Acinetobacter</i> , CRAB, CR-AB, Carbapenemase-producing <i>Acinetobacter</i> , Carbapenemase-producing Organism (CPO), Multidrug-resistant <i>Acinetobacter</i>
LIMS Code	CSPCR
Pre-Approval Required	Submitter must be part of CRE surveillance program, or part of an ongoing investigation.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Bacterial isolate (pure culture) of <i>Acinetobacter baumannii</i> that is resistant to one or more of the following carbapenems at the indicated MIC value (µg/ml): doripenem (MIC >4); imipenem (MIC >4); meropenem (MIC >4).
Minimum Volume Required	Visible growth on agar slant
Storage/Transport Conditions	Transport at room temperature
Transport Medium	Tryptic Soy Agar slant or equivalent
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Transport specimen at room temperature or 2-8°C via category B shipping container. Must be accompanied by test request form and submitter susceptibility report.
Test Methodology	Bacterial identification confirmation by Luminex Verigene Gram-Negative Blood Culture Test and/or MALDI-TOF mass spectrometry. Molecular detection of carbapenem resistance markers (KPC, NDM, IMP, VIM, OXA) by Luminex Verigene Gram-Negative Blood Culture Test. Antimicrobial susceptibility testing by Sensititre broth microdilution.
Turnaround Time	5 business days
Interferences & Limitations	Submission of mixed culture
Additional Information	Results are for epidemiological and infection control purposes and are not to be used as the sole means for clinical diagnosis, patient management, or treatment monitoring.
Reference Range	Not Detected
CPT Code(s)	87149, 87077, 87186, 87185
LOINC Code	88260-5, 75756-7, 21070-8, 86930-5



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Carbapenem-resistant Enterobacteriaceae

Other Name(s)	CRE, Carbapenemase-producing Enterobacteriaceae (CPE), Carbapenemase-producing Organism (CPO), Multidrug-resistant Enterobacteriaceae
LIMS Code	CSPCR
Pre-Approval Required	Submitter must be part of CRE surveillance program, or part of an ongoing investigation.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Bacterial isolate (pure culture) of <i>E. coli</i> , <i>Klebsiella</i> , <i>Enterobacter</i> that is resistant to one or more of the following carbapenems at the indicated MIC value ($\mu\text{g/ml}$): ertapenem (MIC >1), doripenem (MIC >2); imipenem (MIC >2); meropenem (MIC >2). Other species of Enterobacteriaceae will be accepted.
Minimum Volume Required	Visible growth on agar slant
Storage/Transport Conditions	Transport at room temperature
Transport Medium	Tryptic Soy Agar slant or equivalent
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Transport specimen at room temperature or 2-8°C via category B shipping container. Must be accompanied by test request form and submitter susceptibility report.
Test Methodology	Bacterial identification confirmation by Luminex Verigene Gram-Negative Blood Culture Test (<i>E. coli</i> and <i>Klebsiella pneumoniae</i> only) and/or MALDI-TOF mass spectrometry (species other than <i>E. coli</i> or <i>K. pneumoniae</i>). Molecular detection of carbapenem resistance markers (KPC, NDM, IMP, VIM, OXA) by Luminex Verigene Gram-Negative Blood Culture Test. Antimicrobial susceptibility testing by Sensititre broth microdilution. Phenotypic detection of carbapenemase production by CLSI Modified Carbapenem Inactivation Method (mCIM).
Turnaround Time	5 business days
Interferences & Limitations	Submission of mixed culture.
Additional Information	Results are for epidemiological and infection control purposes and are not to be used as the sole means for clinical diagnosis, patient management, or treatment monitoring.
Reference Range	Not Detected
CPT Code(s)	87149, 87077, 87186, 87185
LOINC Code	88260-5, 75756-7, 21070-8, 86930-5



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Carbapenem-resistant *Pseudomonas*

Other Name(s)	CR- <i>Pseudomonas</i> , CRPA, CR-PA, Carbapenemase-producing <i>Pseudomonas</i> , Carbapenemase-producing Organism (CPO), Multidrug-resistant <i>Pseudomonas</i>
LIMS Code	CSPCR
Pre-Approval Required	Submitter must be part of CRE surveillance program, or part of an ongoing investigation.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Bacterial isolate (pure culture) of <i>Pseudomonas aeruginosa</i> that is resistant to one or more of the following carbapenems at the indicated MIC value (µg/ml): doripenem (MIC >4); imipenem (MIC >4); meropenem (MIC >4).
Minimum Volume Required	Visible growth on agar slant
Storage/Transport Conditions	Transport at room temperature
Transport Medium	Tryptic Soy Agar slant or equivalent
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Transport specimen at room temperature or 2-8°C via category B shipping container. Must be accompanied by test request form and submitter susceptibility report.
Test Methodology	Bacterial identification confirmation by Luminex Verigene Gram-Negative Blood Culture Test and/or MALDI-TOF mass spectrometry. Molecular detection of carbapenem resistance markers (KPC, NDM, IMP, VIM, OXA) by Luminex Verigene Gram-Negative Blood Culture Test. Antimicrobial susceptibility testing by Sensititre broth microdilution. Phenotypic detection of carbapenemase production by CLSI Modified Carbapenem Inactivation Method (mCIM).
Turnaround Time	5 business days
Interferences & Limitations	Submission of mixed culture.
Additional Information	Only <i>Pseudomonas aeruginosa</i> (not other <i>Pseudomonas</i> species) will be accepted. Results are for epidemiological and infection control purposes and are not to be used as the sole means for clinical diagnosis, patient management, or treatment monitoring.
Reference Range	Not Detected
CPT Code(s)	87149, 87077, 87186, 87185
LOINC Code	88260-5, 75756-7, 21070-8, 86930-5



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Corynebacterium diphtheria, Culture and Identification

Other Name(s)	Diphtheria
LIMS Code	CD
Pre-Approval Required	Consult with Bacteriology unit prior to submission
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm Documentation that indicates the role of this isolate in clinical disease
Required Specimen Type(s)	Nasopharyngeal swab, pharyngeal membrane
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Store and transport at ambient temperature.
Transport Medium	Swab submitted on Loeffler's slant, or in Amies or Stuart's transport media.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	1. Grow isolate under appropriate conditions prior to shipping and verify purity 2. Ship at ambient temperature using appropriate DOT/IATA approved shipping procedures. Please contact the laboratory by email or phone before shipping.
Test Methodology	Conventional biochemicals, gene sequencing by PCR, and/ or MALDI-TOF mass spectrometry. Please note that referral to the CDC for diphtheria toxin testing will only be performed if the isolate is confirmed as <i>C. diphtheriae</i>
Turnaround Time	7 days (negative); additional time if positive and sent to CDC for toxin testing.
Interferences & Limitations	Specimens should be taken prior to antimicrobial therapy. Organisms must be viable and pure for culture studies.
Additional Information	
Reference Range	No <i>Corynebacterium diphtheria</i> isolated.
CPT Code(s)	87046, 87077
LOINC Code	16676-9



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Legionella pneumophila, Culture and Identification

Other Name(s)	Legionnaires' disease , Legionellosis, Pontiac fever
LIMS Code	LCUL
Pre-Approval Required	For outbreak investigations only. Please contact the Acute Communicable Disease Control (ACDC) Unit at 213-240-7941.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Isolates or culture. For specimen of human origin the acceptable specimen types are sputum, bronchoalveolar lavage (BAL), lung tissue, and endotracheal tube (ETT). For specimen of environmental origin, isolates, swabs and water are acceptable
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Clinical specimen should be frozen immediately. Isolates should be on appropriate slants Buffered Charcoal Yeast Extract (BCYE) and shipped on wet cold paks.
Transport Medium	Water and swab samples should be kept at ambient temperature in containers containing sodium thiosulfate (obtained from the Environmental Microbiology Unit)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Note: surveillance studies may label specimens according to protocol
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Frozen specimen should be sent on dry ice.
Test Methodology	Culture, DFA, Serogrouping, and MALDI-TOF
Turnaround Time	7 days (negative); additional time if positive.
Interferences & Limitations	Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results.
Additional Information	None
Reference Range	By report
CPT Code(s)	87040, 87278, 87205, 87206, 87147
LOINC Code	593-4



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Legionella Urinary Antigen Test

Other Name(s)	Legionnaires' disease, Legionellosis, Pontiac fever
LIMS Code	LEIA
Pre-Approval Required	For outbreak investigations only. Please contact the Acute Communicable Disease Control (ACDC) Unit at 213-240-7941.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Urine
Minimum Volume Required	1 mL
Storage/Transport Conditions	Stability: Ambient: 24 hours; Refrigerated: 2 weeks; Frozen: 2 weeks
Transport Medium	Urine should be collected in a sterile container. Boric acid may be used as a preservative.
Specimen Labeling	Patient full name, DOB, MRN, and date collected. Note: surveillance studies may label specimens according to protocol
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Urine specimens should be shipped in leak proof containers at 2-8°C or frozen.
Test Methodology	Qualitative Immunochromatography
Turnaround Time	1 day
Interferences & Limitations	This test will not detect infections caused by other <i>L. pneumophila</i> serogroups and by other Legionella species. A negative antigen result does not exclude infection with <i>L. pneumophila</i> serogroup 1. Culture is recommended for suspected pneumonia to detect causative agents other than <i>L. pneumophila</i> serogroup 1 and to recover <i>L. pneumophila</i> serogroup 1 when antigen is not detected in urine. Excretion of Legionella antigen in urine may vary depending on the individual patient. Antigen excretion may begin as early as 3 days after onset of symptoms and persist for up to 1 year afterwards. A positive Legionella result can occur due to current or past infection and therefore is not definitive for infection without other supporting evidence.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87899
LOINC Code	6447-7



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Neisseria gonorrhoeae, Culture and Identification

Other Name(s)	GC, Gonorrhoea
LIMS Code	GCC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Cervical or urethral swab; Rectal swab; Throat swab. directly inoculated to In-Tray™ GC system. Pure culture on Chocolate agar slant
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Directly inoculated agar plate in a system which maintains CO ₂ conditions during transport such as In-Tray™ GC system or Thayer-Martin plate with CO ₂ atmosphere. Transport at ambient temperature within 24 hours of collection. DO NOT refrigerate.
Transport Medium	In-Tray™ GC system or Thayer-Martin plate with CO ₂ atmosphere.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Please contact the laboratory by email or phone before shipping.
Test Methodology	Culture, biochemical identification, MALDI-TOF and/or Gonogen II
Turnaround Time	3 days (negative); additional time if positive.
Interferences & Limitations	Specimens should be collected with Dacron or rayon swabs. Cotton or calcium alginate swabs may be toxic or inhibitory to gonococci. Swabs should be taken from the cervix, urethra, rectum or throat and applied to transport media immediately. Cultures must be viable and capable of growing on transport media.
Additional Information	For evaluating suspected cases of treatment failure and monitoring antimicrobial susceptibility.
Reference Range	No <i>Neisseria gonorrhoeae</i> isolated
CPT Code(s)	87040, 87076, 87077
LOINC Code	698-1



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Salmonella and *Shigella* Culture Screen

Other Name(s)	None
LIMS Code	SSC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Stool and/or enrichment broth, swab or urine.
Minimum Volume Required	Do not fill commercial transport vials above indicator line. Overfilling of transport vial results in improper specimen preservation.
Storage/Transport Conditions Transport Medium	<p>Unpreserved stool: The unpreserved fecal sample must be submitted in a clean, container with no soap or disinfectant residue.</p> <p>The sample must be kept cold (refrigerated at 4°C) and transported to the lab within 8 hours of collections. If the sample cannot reach the laboratory within specified time; the sample should be frozen at < 70°C or stored on dry ice.</p> <p>Preserved stool: Use a transport medium, such as Para-Pak C&S (Cary-Blair), for all rectal swabs and for all specimens when a delay of ≥2 hours until plating is anticipated.</p> <p>Specimen storage at 4°C is preferable; Room Temperature (25±5°C) is acceptable if received within 4 days of collection.</p> <p>Urine: (for <i>S.typhi</i> and other <i>Salmonella spp.</i>) Use a transport medium, such as Para-Pak C&S (Cary-Blair) OR BD Vacutainer® Urine C&S.</p> <p>Transport unpreserved urine with cold packs (5±3°C) within 4 hours of collection. Transport preserved urine at room temperature (25±5°C) within 4 days of collection.</p> <p>Environmental/Animal Swab: Use a transport medium, such as Para-Pak C&S (Cary-Blair), for all swabs. Frozen swabs (-15±5°C) are unacceptable.</p>
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship with cold packs in compliance with federal and local guidelines.
Test Methodology	Isolation, MALDI-TOF MS, Phenotypic Identification Including Serotyping
Turnaround Time	4 days for negative. Additional time and testing required if positive
Interferences & Limitations	Three (3) pairs of urine and stool specimens are required for clearance of typhoid. Each pair of stool and urine must be collected at least 24 hours apart. Don't mix the urine and stool specimens together. Keep each in a separate collection container.
Additional Information	None
Reference Range	No <i>Salmonella</i> or <i>Shigella</i> spp. isolated
CPT Code(s)	87045 (<i>Salmonella/Shigella</i>), 87046 (other pathogens), 87076 (MALDI-TOF), 87147 (grouping antisera)
LOINC Code	625-4



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Salmonella Serotyping

Other Name(s)	Salmonella Serogrouping
LIMS Code	SASE
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Pure culture isolate
Minimum Volume Required	Not applicable
Storage/Transport Conditions	No Specific Requirements
Transport Medium	Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable.
Specimen Labeling	Patient full name, DOB, MRN, and date collected
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship at ambient temperature in compliance with federal and local guidelines
Test Methodology	Phenotypic Identification, Phenotypic Serotyping, Genetic Identification, Genetic Serotyping
Turnaround Time	7 days. Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources.
Interferences & Limitations	None
Additional Information	None
Reference Range	By report
CPT Code(s)	87077, 87147
LOINC Code	20951-0



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Shiga Toxin-producing *E. coli*, Culture Isolate

Other Name(s)	Shiga Toxin-producing <i>E. coli</i>
LIMS Code	O157C (culture isolate)
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture isolate
Minimum Volume Required	Fresh, viable subculture
Storage/Transport Conditions	Room Temperature
Transport Medium	Agar slant. If agar slants are not available at the submitting laboratory, an acceptable alternative might be a swab that is heavily inoculated with representative growth and placed in transport medium.
Specimen Labeling	Patient full name, DOB, MRN, date collected. Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. Note: surveillance studies may label specimens according to protocol
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship with cold packs in compliance with IATA, federal and local guidelines. <i>E. coli</i> verotoxigenic cultures should be shipped as Category A Infectious Substances as soon as possible to ensure recovery of organisms. Please contact the laboratory by email or phone before mailing culture.
Test Methodology	Isolation, Lateral Flow Immunoassay, Phenotypic Identification Including Serotyping
Turnaround Time	4 days unless additional testing needs to be performed at the State or CDC.
Interferences & Limitations	Antibiotic therapy can decrease the chances of recovering organisms depending on when specimen was collected.
Additional Information	N/A
Reference Range	By report
CPT Code(s)	87046, 87147, 87335, stx 1 and stx 2: 87427 and 87427-59
LOINC Code	20789-4



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Shiga Toxin-producing *E. coli*, Screen

Other Name(s)	Shiga Toxin-producing <i>E. coli</i>
LIMS Code	O157 (screen)
Pre-Approval Required	None; Please contact the laboratory by email or phone before shipping.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Stool and/or enrichment broth
Minimum Volume Required	1g (stool), swab or 5 mL (broth)
Storage/Transport Conditions	Maintain specimen at 4°C
Transport Medium	Stool in Cary-Blair, Enrichment broth (GN or MacConkey)
Specimen Labeling	Patient full name, DOB, MRN, date collected. Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. Note: surveillance studies may label specimens according to protocol
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship with cold packs in compliance with IATA, federal and local guidelines. Shiga toxin-positive broth cultures should be shipped as Category A Infectious Substances as soon as possible to ensure recovery of organisms,
Test Methodology	Isolation, Lateral Flow Immunoassay, Phenotypic Identification Including Serotyping
Turnaround Time	4 days
Interferences & Limitations	Antibiotic therapy can decrease the chances of recovering organisms depending on when specimen was collected.
Additional Information	N/A
Reference Range	N/A
CPT Code(s)	87046, 87147, 87335, stx 1 and stx 2: 87427 and 87427-59
LOINC Code	10851-4, 32777-5



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Shigella Serogrouping

Other Name(s)	Shigella typing
LIMS Code	SHIG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Pure culture isolate
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Agar plates are not acceptable.
Transport Medium	Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship at ambient temperature in compliance with federal and local guidelines
Test Methodology	Phenotypic Identification, Phenotypic Serotyping, Genetic Identification, Genetic Serotyping
Turnaround Time	7 days. Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources.
Interferences & Limitations	Viable culture required
Additional Information	None
Reference Range	By report
CPT Code(s)	87077, 87147
LOINC Code	17576-0



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Streptococcus Group A, PCR with Reflex

Other Name(s)	GAS, Group A Strep
LIMS Code	GASPCR
Pre-Approval Required	For surveillance only
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Throat swab collected using Copan eSwab Copan 480C or Copan 480CE
Minimum Volume Required	1 mL
Storage/Transport Conditions	Store samples refrigerated at 4-8C; Transport on cold pack to the laboratory as soon as possible.
Transport Medium	Copan eSwab (480C or 480CE)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	No special requirements.
Test Methodology	Real-time PCR
Turnaround Time	2 business days
Interferences & Limitations	Additional follow-up testing by culture is required if PCR assay result is negative and clinical symptoms persist, or there is an outbreak of acute rheumatic fever.
Additional Information	Positive PCR specimens will be reflexed to throat culture for organism recovery.
Reference Range	Not detected
CPT Code(s)	87651; reflex to 87070 if required
LOINC Code	60489-2



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***Streptococcus pneumoniae* Urinary Antigen Test**

Other Name(s)	S. pneumoniae antigen in urine
LIMS Code	SEIA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Urine (for diagnosis of pneumonia) Cerebral spinal fluid (for diagnosis of meningitis)
Minimum Volume Required	1 mL
Storage/Transport Conditions Transport Medium	URINE Urine specimens should be collected in standard containers. Boric acid may be used as a preservative. Stability: Ambient: 24 hours; Refrigerated: 2 weeks; Frozen: 2 weeks CSF Stability: Ambient: 24 hours; Refrigerated or Frozen: 2 weeks
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type. Note: surveillance studies may label specimens according to protocol
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. When necessary, specimens should be shipped in leak-proof containers at 2-8°C or frozen.
Test Methodology	Qualitative Immunochromatography
Turnaround Time	1 day
Interferences & Limitations	<i>Streptococcus pneumoniae</i> vaccine may cause false positive results in urine with this test in the 48 hours following vaccination. The effect of vaccination has not been determined on persons with pneumococcal meningitis. Hence, it is recommended that this test not be administered within 5 days of receiving the <i>S. pneumoniae</i> vaccine. The accuracy of this test in urine has not been proven in young children. Performance on CSF in young children, on the other hand, is established.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87899
LOINC Code	24027-5



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***Vibrio* species, Culture and Identification**

Other Name(s)	None
LIMS Code	VSC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Stool
Minimum Volume Required	Do not fill commercial transport vials above indicator line. Overfilling of transport vial results in improper specimen preservation.
Storage/Transport Conditions Transport Medium	Unpreserved stool: The unpreserved stool must be submitted in a clean, container with no soap or disinfectant residue. Transport to the lab within 8 hours of collection. Preserved stool: Use a transport medium, such as Para-Pak C&S (Cary-Blair). Transport within three days at ambient temperature (25±5°C). Refrigerated samples are not recommended. Frozen samples are unacceptable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship in compliance with federal and local guidelines.
Test Methodology	Screening for Isolation, MALDI-TOF MS, Phenotypic Identification Including Serotyping
Turnaround Time	4 days for negative. Additional time and testing required if positive
Interferences & Limitations	Buffered glycerol saline is an unacceptable transport media for <i>Vibrio</i> culture
Additional Information	None
Reference Range	By report
CPT Code(s)	87046, 87076 (MALDI-TOF), 87147 (grouping antisera)
LOINC Code	6581-3



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Yersinia species, Culture and Identification

Other Name(s)	None
LIMS Code	YEC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Stool
Minimum Volume Required	Do not fill commercial transport vials above indicator line. Overfilling of transport vial results in improper specimen preservation.
Storage/Transport Conditions Transport Medium	Unpreserved stool: Stool must be submitted in a clean, container with no soap or disinfectant residue. Transport to the lab within 8 hours of collection. Preserved stool: Use a transport medium, such as Para-Pak C&S (Cary-Blair). Transport at ambient temperature and within 4 days of collection. Refrigerated samples are not recommended. Frozen samples are unacceptable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship Monday-Thursday overnight to avoid weekend deliveries. Ship in compliance with federal and local guidelines.
Test Methodology	Isolation, MALDI-TOF MS, Phenotypic Identification Including Serotyping
Turnaround Time	4 days for negative. Additional time and testing required if positive
Interferences & Limitations	None
Additional Information	None
Reference Range	By report
CPT Code(s)	87046, 87076 (MALDI-TOF), 87147 (grouping antisera)
LOINC Code	28549-4



Bioterrorism Response



Los Angeles County Public Health Laboratories

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Bacillus anthracis, Rule-out or Detection in Clinical Specimens

Common Name(s)	Anthrax
LIMS Code	None
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Pure culture/isolated colony (presumptive for <i>B. anthracis</i> if referred) Cutaneous-Vesicular (early) stage, Eschar (late) stage Gastrointestinal-Stool specimen Blood-Collect blood (late stage of infection) directly into an appropriate blood culture bottle (aerobic and anaerobic) Inhalational- Sputum Cerebral spinal fluid only if signs of meningitis occur Postmortem Tissue
Minimum Volume Required	Stool: \geq 5 grams Blood and Body Fluids: \geq 500 μ L
Storage/Transport Conditions	Cultures may be stored at room temperature or at 2-8°C
Transport Medium	Agar slants preferred for shipping isolates
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemicals
Turnaround Time	7 days
Interferences & Limitations	Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin).
Additional Information	
Reference Range	Not Detected
CPT Code(s)	87077 (aerobic culture ID): 87801 (PCR)
LOINC Code	11469-4



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Botulism Toxin Testing (excluding Infant Botulism)

Other Name(s)	Botulism, <i>Clostridium botulinum</i> Toxin, Mouse Bioassay
LIMS Code	CBNT
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. All suspected botulism cases should be reported immediately by telephone to the Local Health Department (CA Code of Regulations, Title 17, Section 2500). In Los Angeles County, call Acute Communicable Disease Control 213-240-7941 or the County Emergency Operator 213-974-1234 after hours and on weekends and holidays to report the suspect case and to obtain botulinum antitoxin. Suspect cases residing in Long Beach (562-570-4302) or Pasadena (626-744-6000) should be reported to the respective public health department.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm Brief medical/clinical history including a list of medications the patient has recently received. Anticholinergics, such as ambenonium (Mytelase), neostigmine (Prostigmine), and pyridostigmine (Regonol, Mestion) are of special concern.
Required Specimen Type(s)	<p>A. PRE-ANTITOXIN SERUM</p> <ul style="list-style-type: none"> Draw three 10 cc red-top or serum-separating vacutainer tubes. Refrigerate tubes until well clotted. Spin down cells and ship all tubes <u>without removing serum</u>. Note: Testing the patient post-treatment is no longer indicated, according to the Centers for Disease Control and Prevention (CDC) and California public health officials. <p>B. FECAL SAMPLE – for both foodborne AND wound botulism</p> <ul style="list-style-type: none"> Submit at least 25 g feces in a clean, dry container without transport media. If an enema is needed, use only sterile, non-bacteriostatic water. Submit approximately 50 ml of enema effluent. Stool can be collected EITHER pre- or post-antitoxin administration. <p>C. GASTRIC CONTENTS, ASPIRATE or VOMITUS – for both foodborne AND wound botulism</p> <ul style="list-style-type: none"> Submit 25-50 ml of gastric material taken before lavage in a clean, dry container without transport media. <p>Only samples taken within 48 hours of collection will be accepted.</p>
Minimum Volume Required	<p>Serum: Three 10 mL red-top or gold top serum separator tubes (SST).</p> <p>Stool: 25 g feces in a clean, dry container without transport media or 50 ml of enema effluent</p> <p>Gastric Contents: 25-50 ml of gastric material</p>
Storage/Transport Conditions Transport Medium	All specimens submitted to the PHL should be submitted with adequate gel-type cold packs at 4°C, not frozen. Place specimens into biohazard-labeled zip lock specimen bags to contain any leakage. The submitter must complete a separate test requisition form for each type of sample (serum, fecal, gastric).
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing</p>

	<p>specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.</p>
Test Methodology	Mouse Bioassay
Turnaround Time	12 days
Interferences & Limitations	Atypical results may result from interfering substances (e.g., drugs, food additives/components) and toxins not neutralized by antitoxin (e.g., botulinum C, D, or G)
Additional Information	The Infant Botulism Reporting Hotline of the California Department of Public Health is 510-231-7600 . See http://www.infantbotulism.org/ for infant botulism specimen collection guidelines, diagnostics, and treatment specific to infant botulism.
Reference Range	Not Detected
CPT Code(s)	87001 (animal inoculation); 87076 (anaerobic culture ID); 87999 (mouse bioassay)
LOINC Code	33704-8



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Brucella Serology, BMAT

Other Name(s)	Brucella antibody
LIMS Code	None
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Paired (acute- and convalescent-preferred) serum collected at least 14 days apart. Sequential serologic testing at 0, 6, 12, 18 and 24 weeks post exposure.
Minimum Volume Required	100 µL
Storage/Transport Conditions	Store at < -20°C until both samples can be shipped together. Ship specimens cold or frozen.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.</p>
Test Methodology	Brucella Micro Agglutination Test (BMAT)
Turnaround Time	5 days
Interferences & Limitations	Hemolyzed, lipemic and contaminated serum can produce erroneous results. No serology available for <i>RB51</i> and <i>B. canis</i> . May have poor sensitivity for chronic or complicated brucellosis.
Additional Information	
Reference Range	<1:20, Negative
CPT Code(s)	86622
LOINC Code	86459-5



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***Brucella species*, Rule-out or Detection in Clinical Specimens**

Other Name(s)	B. abortus; B. melitensis; B. suis; Brucellosis
LIMS Code	BRID
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Culture/isolated colony (presumptive for <i>Brucella spp.</i> if referred) Blood/Serum Body fluids (bone marrow, joint, CSF or abscess fluid) Tissue (spleen, liver)
Minimum Volume Required	Blood and Body Fluids: 500 µL
Storage/Transport Conditions Transport Medium	Cultures should be sent on a agar slant at ambient temperature Blood and body fluids should be shipped on cold packs (wet ice if necessary). Tissues should be sent frozen on dry ice.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	PCR, Culture, Conventional Biochemicals
Turnaround Time	21 days
Interferences & Limitations	Blood specimens for PCR should be collected in EDTA or Sodium Citrate tubes (not heparin)
Additional Information	For additional information please refer to the ASM sentinel laboratory guide: http://www.asm.org/images/pdf/Clinical/Protocols/brucella_0-15-04.pdf
Reference Range	Not Detected
CPT Code(s)	87077 (aerobic culture ID); 87801 (confirm by PCR)
LOINC Code	552-0 (culture); 41626-3 (PCR)



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***Burkholderia*, Rule-out or Detection in Clinical Specimens**

Other Name(s)	Glanders; Melioidosis; <i>B. pseudomallei</i> ; <i>B. mallei</i>
LIMS Code	
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Pure culture/isolated colony (presumptive for <i>B. mallei/pseudomallei</i> if referred) Bone marrow or whole blood: Considered the best specimen for culture. Collect directly into an appropriate blood culture bottle. Sputum or Bronchoscopically obtained specimens: Collect expectorated specimen into sterile transport cup or collect during bronchoscopy procedure. Tissue specimens (biopsies, abscess aspirates) and wound swabs: Tissue pieces (at least the size of a pea) should be collected and kept moist. Alternatively, a swab from a tissue sample can be submitted in a hospital transport tube with medium to stabilize specimen (e. g. Amies charcoal). Urine: Collect at least 1 mL into leak-proof container.
Minimum Volume Required	Urine: ≥ 1 mL Tissue Specimens: at least the size of a pea Blood and Body Fluids: ≥ 500 µL
Storage/Transport Conditions	Agar slants preferred for shipping isolates Cultures may be stored at room temperature or at 2-8°C. Tissue specimens should be transported in sterile containers at room temperature within 1 hour of collection. Urine should be transported at room temperature up to 2 hours. Refrigerate up to 24 hours until culture inoculation. Sputum is to be transported at room temperature up to 2 hours. If it is known that material will be transported from 2-24 h after collection, then store & transport at 2-8° C. Bone marrow or whole blood should be transported room temperature as soon as possible to obtain the diagnosis.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.

	Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemical
Turnaround Time	7 days
Interferences & Limitations	Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin)
Additional Information	For additional information please refer to the ASM sentinel laboratory guide: http://asm.org/images/pdf/Clinical/Protocols/bpseudomallei2008.pdf
Reference Range	Not Detected
CPT Code(s)	87081, 87077, 87150
LOINC Code	41628-9



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Clostridium botulinum Rule-out or Detection in Clinical Specimens

Other Name(s)	Botulism
LIMS Code	
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. All suspected botulism cases should be reported immediately by telephone to the Local Health Department (CA Code of Regulations, Title 17, and Section 2500). In Los Angeles County, call Acute Communicable Disease Control 213-240-7941 or the County Emergency Operator 213-974-1234 after hours and on weekends and holidays to report the suspect case and to obtain botulinum antitoxin. Suspect cases residing in Long Beach (562-570-4302) or Pasadena (626-744-6000) should be reported to the respective public health department.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Clinical Postmortem Culture/isolate Stool Vomitus/gastric contents Food/drink (solid or liquid) Environmental: soil, water
Minimum Volume Required	Stool: 25 g feces in a clean, dry container without transport media or 50 ml of enema effluent Gastric Contents: 25-50 ml of gastric material
Storage/Transport Conditions	Store and transport all specimens at room temperature in a biohazard specimen bag. Submit samples ASAP for anaerobic culture to the public health laboratory.
Transport Medium	Anaerobic transport device/vial
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemical
Turnaround Time	18 days
Interferences & Limitations	A swab is not considered satisfactory for anaerobic culture and may only be used as a last resort. If submitted, obtain as much material as possible and utilize an aerobic culturette device. Special collection procedures are essential to recovery of anaerobic bacteria since brief exposure to oxygen may be detrimental to their survival.

Additional Information	<p>If the excised specimen is too large to fit inside the anaerobic transport device, a sterile screw cap cup may be used. A piece of gauze with a small amount of physiologic saline can be used to keep the specimen moist. Large tissue samples will maintain a sufficient internal anaerobic environment during transport.</p> <p>If incision and drainage is performed, lavage the open site with sterile, non-bacteriostatic, normal saline and submit washings for culture using an anaerobic transport device/vial. For needle aspirates, aseptically clean site and perform the aspiration from the deepest part of the lesion with 3-5 ml syringe and a 22- to 23-gauge needle. Disinfect rubber stopper of anaerobic transport device/vial with 70% alcohol.</p> <p>Expel all air from the syringe before collecting sample. Inject sample slowly and directly through the rubber stopper of the anaerobic transport device/vial. Never send capped needle syringes containing specimens to the laboratory.</p> <p>Needle transport is unsafe because there is a risk of needle stick injury; also the sample may be expelled accidentally during transport and ruined. Always transfer aspirated material to an anaerobic transport device.</p>
Reference Range	Not Detected
CPT Code(s)	87149 and 87150 (PCR); 87076 (anaerobic culture ID)
LOINC Code	33694-1, 46705-0



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Coxiella burnetii DNA, Qualitative Real-time PCR

Other Name(s)	Q fever
LIMS Code	
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Whole blood: Anticoagulated whole blood collected in EDTA treated tubes preferred. Environmental samples: Swabs
Minimum Volume Required	1 mL Serum
Storage/Transport Conditions	Store refrigerated. Transport with cold packs. If previously frozen, keep specimen frozen.
Transport Medium	Sterile container for swabs
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Real-Time PCR
Turnaround Time	24 hours
Interferences & Limitations	Hemolysis in whole blood will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. Avoid blood collection in heparin tubes.
Additional Information	
Reference Range	Not Detected
CPT Code(s)	87798
LOINC Code	60261-5



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Ebola Zaire virus RNA, Qualitative Real-Time PCR

Other Name(s)	Ebola
LIMS Code	EZPCA
Pre-Approval Required	<p>For Los Angeles County, prior approval is required from the Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist in consultation with the California Department of Public Health (CDPH) and Centers for Disease Control and Prevention (CDC). ACDC can be contacted by calling 213-240-7941 during business hours. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.</p> <p>For outside jurisdictions, approval is required from the local health department in consultation with CDPH and CDC.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p> <p>CDC Infectious Disease (CDC Form 50.34) http://www.cdc.gov/laboratory/specimen-submission/form.html</p> <p>CDC Viral Special Pathogens Branch (VSPB) Diagnostic Specimen Submission Form http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf</p>
Required Specimen Type(s)	Blood and serum
Minimum Volume Required	8 mL
Storage/Transport Conditions	Store samples at 4-8°C using double biohazard specimen bags in a secondary container. Specimen should be sent on cold packs using a Category A shipper.
Transport Medium	Two (2) lavender top EDTA plastic vacutainer tubes
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. One sample is sent to Los Angeles County Public Health Laboratory and the other sample is sent to CDC.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov</p>
Test Methodology	Real-Time PCR
Turnaround Time	24 hours
Interferences & Limitations	This test is specific for Ebola Zaire virus and does not detect other Ebola species or hemorrhagic fever viruses. Specimens from patients who have received therapeutics or

	vaccines based on nucleic acid sequences derived from Ebola Zaire virus may exhibit false positive or other confounding test results. If fever or symptoms have been present for less than 72 hours, a repeat test may be required to rule out Ebola virus infection.
Additional Information	Ebola Real-Time RT-PCR method developed by the Department of Defense and approved by the U.S. Food and Drug Administration under emergency use authorization.
Reference Range	Not Detected
CPT Code(s)	87798
LOINC Code	75411-9



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Franciscella Serology

Other Name(s)	Tularemia; Rabbit Fever; <i>Franciscella tularensis</i> Antibody
LIMS Code	
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum or Plasma
Minimum Volume Required	≥100 µL
Storage/Transport Conditions	Store at < -20°C until both samples can be shipped together. Ship specimens cold.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.</p>
Test Methodology	Serum Agglutination
Turnaround Time	5 days
Interferences & Limitations	Nonspecific cross-reactivity with Brucella spp. and Legionella spp. antigens have been reported. This test does not differentiate between early and late antibody response. Seroreactivity may last for years after initial exposure.
Additional Information	
Reference Range	Not Detected
CPT Code(s)	86668
LOINC Code	33683-4



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Francisella tularensis, Rule-out or Detection in Clinical Specimens

Other Name(s)	Tularemia; Rabbit Fever
LIMS Code	None
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Culture Isolate (presumptive for <i>F. tularensis</i> if referred) Blood culture Biopsied tissue or scraping of an ulcer is preferable; a swab of the ulcer is an acceptable alternative Bronchial/tracheal wash, pleural fluid or sputum if pneumonic tularemia is suspected Autopsy/necropsy specimens: abscess material or sections of lymph node, lung, liver, spleen or bone marrow scrapings Aspirate of involved tissue
Minimum Volume Required	Tissue: > 2 grams (or 0.5-1 cm ³) Blood and Body Fluids: ≥ 500 µL
Storage/Transport Conditions	Agar slants preferred for shipping isolates Cultures may be stored at room temperature or at 2-8°C. Blood: Transport directly to laboratory at room temperature. Hold at room temperature until placed onto the blood culture instrument or incubator. Do not refrigerate. Follow established laboratory protocol for processing blood cultures. Biopsy: Submit tissue, scraping, or aspirate in a sterile container. For small tissue samples, add several drops of sterile normal saline to keep the tissue moist. Transport at room temperature for immediate processing. If processing of specimen is delayed, keep specimen chilled (2-8°C). Swabs: Obtain a firm sample of the advancing margin of the lesion. If using a swab transport carrier, the swab should be reinserted into the transport package and the swab fabric moistened with the transport medium inside the packet. Transport at 2-8°C; room temperature is acceptable. If processing of specimen is delayed, keep specimen chilled (2-8°C).
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.

	Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemical, DFA
Turnaround Time	7 days
Interferences & Limitations	Process samples/specimens as rapidly as possible for isolation and testing.
Additional Information	
Reference Range	Not Detected
CPT Code(s)	87077 (aerobic culture ID); 87801 (confirm by PCR)
LOINC Code	33676-8, 33677-6



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Malaria, Rapid Antigen Test

Other Names(s)	<i>Plasmodium falciparum, Plasmodium vivax, Plasmodium malariae, Plasmodium ovale</i>
LIMS Code	MATST
Pre-Approval Required	<p>For Los Angeles County, prior approval is required from the Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist in consultation with the California Department of Public Health (CDPH) and Centers for Disease Control and Prevention (CDC). ACDC can be contacted by calling 213-240-7941 during business hours. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.</p> <p>For outside jurisdictions, approval is required from the local health department in consultation with CDPH and CDC.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.html</p> <p>CDC Infectious Disease (CDC Form 50.34) http://www.cdc.gov/laboratory/specimen-submission/form.html</p> <p>CDC Viral Special Pathogens Branch (VSPB) Diagnostic Specimen Submission Form http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf</p>
Required Specimen Type(s)	Two (2) lavender top EDTA blood specimens in plastic vacutainer tubes
Minimum Volume Required	4 mL x 2
Storage/Transport Conditions	Store samples at 4-8°C and transport on cold packs using a Category A shipper.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. One sample is sent to Los Angeles County Public Health Laboratory and the other sample is sent to CDC.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov</p>
Test Methodology	Immunochromatographic Membrane assay
Turnaround Time	24 hours
Interferences & Limitations	Performance of the BinaxNOW Malaria test has not been established for monitoring treatment of malaria. The test is not intended for use in screening asymptomatic populations.

Additional Information	The BinaxNOW® Malaria test is an <i>in vitro</i> immunochromatographic assay for the qualitative detection of <i>Plasmodium</i> antigens circulating in human venous and capillary EDTA whole blood of individuals with signs and symptoms of malarial infection.
Reference Range	Negative
CPT Code(s)	87207
LOINC Code	76772-3



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MERS-CoV RNA, Qualitative Real-Time PCR

Other Name(s)	Middle East Respiratory Syndrome Coronavirus
LIMS Code	MERPCR
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s) <i>Collect all three specimen types: Lower respiratory, Upper respiratory, and serum specimens</i>	<p>A. Lower Respiratory Tract Specimens: Bronchoalveolar lavage, tracheal aspirate, pleural fluid: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.</p> <p>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.</p> <p>B. Upper Respiratory Tract Specimens: Nasopharyngeal AND oropharyngeal swabs (NP/OP swabs): Use only synthetic fiber swabs with plastic 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/OP specimens can be combined, placing both swabs in the same vial. Nasopharyngeal swabs: 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. Oropharyngeal swabs: Swab the posterior pharynx, avoiding the tongue. Nasopharyngeal wash/aspirate or nasal aspirates: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.</p> <p>C. Serum: A single serum specimen collected optimally during the first week after symptom onset, preferably within 3-4 days, after symptom onset.</p>
Minimum Volume Required	Serum: 5-7 mL Bronchoalveolar lavage, tracheal aspirate, pleural fluid: 3-5 mL
Storage/Transport Conditions	Refrigerate or freeze tubes after specimens are placed in them. If specimens will be examined within 48 hours after collection, they can be refrigerated. If specimens must be held longer than 48 hours, freeze them as soon as possible after collection. Although storage in an ultra-low freezer (-70°C) is preferable, storage in a home-type freezer (if properly set at -20°C) is acceptable for short periods.
Transport Medium	Swabs may be shipped in commercial viral transport media
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p>

	Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	24 hours
Interferences & Limitations	Process samples/specimens as rapidly as possible for isolation and testing. Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do not use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays.
Additional Information	Novel Coronavirus 2012 Real-time RT-PCR method developed by the Department of Defense and approved by the U.S. Food and Drug Administration under emergency use authorization.
Reference Range	Not Detected
CPT Code(s)	87798
LOINC Code	74473-0 (N2 gene), 74472-2 (N3 gene RNA), 74474-8 (up E gene RNA)



COUNTY OF LOS ANGELES

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Multi-Agent Screen (MAS), Detection in Environmental Samples

Other Name(s)	LRN Bio-threat Multi-Agent Screening, MAS
LIMS Code	EBAS - <i>Not currently built in Sunquest</i>
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Contact the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County Chain of Custody Form
Required Sample Type(s)	Swabs Wipes Powders Liquids Plant Material (e.g., leaf, flower, stalk) Seeds or beans Envelope/letter/paper Packages
Minimum Volume Required	Bulk sampling of visible materials (e.g., powders, liquids, etc.) and/or sampling from contaminated surfaces (e.g., with polyester swabs).
Storage/Transport Conditions	Dry swabs or powders can be stored and shipped at room temperature. Liquid samples should be held and shipped at 4°C.
Sample Labeling	Completed Chain of Custody Form
Shipping Instructions and Sample Handling Requirements	Do not send samples using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for sample notification. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemical, Time-resolved Fluorescence
Turnaround Time	7 days
Interferences & Limitations	None
Additional Information	Screening for <i>Bacillus anthracis</i> , <i>Brucella spp.</i> , <i>Burkholderia mallei</i> , <i>Burkholderia pseudomallei</i> , <i>Francisella tularensis</i> , <i>Yersinia pestis</i> , Orthopoxvirus, and ricin toxin
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	14325-5



Los Angeles County Public Health Laboratories

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Orthopox virus (Rash Panel) Real-Time PCR

Other Name(s)	
LIMS Code	Not Available
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	<p>Lesion Material:</p> <ul style="list-style-type: none"> • Skin or crust from roof of vesicle or pustule • Vesicular or pustular fluid <ul style="list-style-type: none"> ○ Slide (touch prep) or EM grid ○ Swab • Punch Biopsy <p>Ocular impressions or swabs (if conjunctivitis is present) Serum (serum alone should never be used to diagnose an <i>Orthopoxvirus</i> infection if the rash is still present)</p>
Minimum Volume Required	Serum: 1 mL
Storage/Transport Conditions	<p>If transported within 24 hours of collection, package specimens from a single patient on refrigerated (2°C to 8°C) gel packs.</p> <p>If specimens will be transported after 24 hours of collection, all samples (EXCEPT for EM grids, slides and formalin fixed tissues) should be stored on dry ice or at –20°C to –70°C. Serum may be frozen if aliquoted, otherwise it should remain at 2°C to 8°C.</p> <p>EM grids, slides and formalin-fixed biopsies should be shipped at room temperature or with refrigerated specimens. DO NOT FREEZE EM grids, slides or formalin-fixed biopsies.</p>
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.</p>
Test Methodology	Real-Time Polymerase Chain Reaction (PCR)
Turnaround Time	24 hours
Interferences & Limitations	Cross contamination may occur if gloves are not changed between obtaining samples, or if samples are not packaged individually. If specimens are not stored and transported at the correct temperatures, samples may not yield reliable results.

Additional Information	Real-time RT-PCR assay to rule out <i>variola virus</i>
Reference Range	Not Detected
CPT Code(s)	87801
LOINC Code	41853-3



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Plague Serology

Other Name(s)	Plague Antibody; <i>Yersinia pestis</i> Antibody
LIMS Code	None
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) after hours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Acceptable specimen types (Human and Animal): Serum or Plasma
Minimum Volume Required	1 mL
Storage/Transport Conditions	Serum may be stored at 2°-8°C for up to 14 days. If testing is delayed for a longer period, serum may be frozen. Frozen specimens should be shipped on dry ice. Refrigerated specimens should be shipped on ice packs.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov .
Test Methodology	Passive Hemagglutination, Passive Hemagglutination Inhibition
Turnaround Time	5 days
Interferences & Limitations	Hemolyzed samples may interfere with test results. Presence of antibody in the PHA/HI test does not indicate whether infection is current, or recent.
Additional Information	Presumptive: A single serum/plasma specimen with a titer > 1:10 is presumptive for <i>Y. pestis</i> . Confirmatory: Paired serum specimens, taken at least 1 month apart showing a 4-fold titer difference between the specimens, is confirmatory for <i>Y. pestis</i> .
Reference Range	Titer <10, No Antibody Detected
CPT Code(s)	86793
LOINC Code	33689-1



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Ricin Toxin, Detection in Environmental Samples

Other Name(s)	<i>Ricinus communis</i> (ricin) toxin testing in environmental samples
LIMS Code	None
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Contact the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County Chain of Custody Form
Required Sample Type(s)	Swabs Wipes Powders Liquids Plant Material (e.g., leaf, flower, stalk) Seeds or beans Envelope/letter/paper Packages
Minimum Volume Required	Bulk sampling of visible materials (e.g., powders, liquids, etc.) and/or sampling from contaminated surfaces (e.g., with polyester swabs).
Storage/Transport Conditions	Dry swabs or powders can be stored and shipped at room temperature. Liquid samples should be held and shipped at 4°C.
Sample Labeling	Completed Chain of Custody form
Shipping Instructions and Sample Handling Requirements	Do not send samples using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for sample notification. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Time-Resolved Fluorescence
Turnaround Time	24 hours
Interferences & Limitations	None
Additional Information	
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	41641-2



Los Angeles County Public Health Laboratories

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***Rickettsia* Real-Time PCR**

Other Name(s)	<i>Rickettsia</i> RT-PCR assay for clinical samples
LIMS Code	RICPCR
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Whole blood preserved with purple top EDTA tube or acid citrate dextrose Solution A (ACD-A)
Minimum Volume Required	4 mL
Storage/Transport Conditions	Store samples at 4-8°C using double biohazard specimen bags in a secondary container. Specimen should be sent on cold packs
Transport Medium	
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p> <p>For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory.</p> <p>Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.</p>
Test Methodology	Real-Time PCR
Turnaround Time	2 days
Interferences & Limitations	
Additional Information	This test was developed by the CDC Laboratory Response Network.
Reference Range	Not Detected
CPT Code(s)	87798 x 5
LOINC Code	7996-2; 53608-6; 48868-4



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Yersinia pestis, Rule-out or Detection in Clinical Specimens

Other Name(s)	Plague
LIMS Code	Not Available
Pre-Approval Required	Contact BTRU (562) 658-1360 prior to submission of samples for approval. Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist can be contacted by calling 213-240-7941 during business hours or by contacting the administrator on duty (AOD) afterhours at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm MDL Bacterial Culture for Identification Form
Required Specimen Type(s)	Pure culture/isolated colony (presumptive for <i>Y. pestis</i> if referred) Tissue: biopsy of affected area (e.g., lymph node, lung) Lymph node (bubo) aspirate or lymphoid tissue smears Sputum, bronchial wash or tracheal aspirate Blood, blood culture bottle or tube Autopsy/necropsy specimens: abscess material, lymph node, lung, liver, spleen, and/or bone marrow scrapings
Minimum Volume Required	Blood , Aspirates, Fluids: ≥ 300 µL Tissues: ≥ 2 g (or 0.5-1 cm ³)
Storage/Transport Conditions	Agar slants preferred for shipping isolates Cultures may be stored at room temperature or at 2-8°C. Store samples at 2-8°C. If processing is delayed store specimens (except tissue samples) for culture in glycerol containing solutions (10% final concentration) at ≤ -70°C and ship on dry ice. Tissue samples can be directly frozen at ≤ -70°C and shipped on dry ice.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	Do not send specimens using regular courier or without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact the Bioterrorism Response Unit at (562) 658-1360 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC using World Courier. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov.
Test Methodology	Polymerase Chain Reaction (PCR), Culture, Conventional Biochemical, DFA
Turnaround Time	7 days
Interferences & Limitations	
Additional Information	
Reference Range	Not Detected
CPT Code(s)	86793
LOINC Code	33691-7



Chemical Terrorism Response



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Abrine

Other Name(s)	None
LIMS Code	ABRC
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Urine - clean-catch collected midstream
Minimum Volume Required	40-60 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	Sterile, screw-cap collection cup without additives Provide 2 empty collection cups from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1300 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Liquid Chromatography Mass Spectrometry (LC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	L-abrine (N-methyl tryptophan) shares a common plant source with abrin, and its presence can be used as a marker for abrin exposure.
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	54933-7



Los Angeles County Public Health Laboratories

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Abrine and Ricinine Panel

Other Name(s)	
LIMS Code	ABRC
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Urine - clean-catch collected midstream
Minimum Volume Required	40-60 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	Sterile, screw-cap collection cup without additives Provide 2 empty collection cups from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1300 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide appropriate shipping manifest. Follow standard chain-of-custody protocols. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Liquid Chromatography Mass Spectrometry (LC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Ricinine is a small molecule (164 g/mol, 3-cyano-4-methoxy-N-methyl-2-pyridone) that shares a common plant source with ricin, and its presence can be used as a marker for ricin exposure.
Reference Range	Not Detected

CPT Code(s)	Not Applicable
LOINC Code	54932-9



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Blood Metals Screen

Other Name(s)	Blood Metals
LIMS Code	BM
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Blood Collect specimens only from adults unless otherwise specified.
Minimum Volume Required	12 mL each tube type
Storage/Transport Conditions	Store samples at 2 - 8°C. Transport on cold packs.
Transport Medium	Three (3) lavender top EDTA and three (3) green top sodium heparin vacutainer tubes. Provide two (2) empty EDTA and two (2) sodium heparin vacutainer tubes from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1328 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Inductively-Coupled Plasma/Mass Spectrometry (ICP/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Determination of Mercury (Hg), Lead (Pb), and Cadmium (Cd) in whole blood.
Reference Range	Mercury < 10 ng/mL; Cadmium < 5 ng/mL; Lead < 5 mcg/dL
CPT Code(s)	Not Applicable
LOINC Code	5685-3 (Mercury); 5609-3 (Cadmium); 5671-3 (Lead)



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Cyanide, Blood

Other Name(s)	Cyanide in Blood, CN
LIMS Code	CYN
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Blood Collect specimens only from adults unless otherwise specified.
Minimum Volume Required	12 mL each tube type
Storage/Transport Conditions	Store samples at 2 - 8°C. Transport on cold packs.
Transport Medium	Three (3) lavender top EDTA and three (3) green top sodium heparin vacutainer tubes. Provide (2) empty EDTA and (2) sodium heparin vacutainer tubes from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1300 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Gas Chromatography/Mass Spectrometry (GC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Cyanide is measured in whole blood using static headspace sampling and chromatography with mass selective detection in mass spectrometry.
Reference Range	< 0.2 mcg/mL
CPT Code(s)	Not Applicable
LOINC Code	5634-1



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Organophosphate Nerve Agents, Serum

Other Name(s)	OPNAS
LIMS Code	OPNA
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Serum collected in gold top serum separator tube (SST)
Minimum Volume Required	0.5 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C (or lower) as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	None Provide 2 empty collection devices from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1300 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide appropriate shipping manifest. Follow standard chain-of-custody protocols. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Liquid Chromatography/Mass Spectrometry (LC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Stable breakdown products of organophosphate nerve agents appear in serum and can be identified using mass spectrometry to identify the original nerve agent.
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Organophosphate Nerve Agents, Urine

Other Name(s)	OPNA
LIMS Code	OPNA
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Urine - clean-catch collected midstream
Minimum Volume Required	40-60 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	Sterile, screw-cap collection cup without additives. Provide 2 empty collection cups from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1300 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide appropriate shipping manifest. Follow standard chain-of-custody protocols. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Liquid Chromatography/Mass Spectrometry (LC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Stable breakdown products of organophosphate nerve agents appear in urine and can be identified using mass spectrometry to identify the original nerve agent.
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	28042-0



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Tetranitromethane

Other Name(s)	TNM
LIMS Code	TNM
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Urine - Clean-catch collected midstream
Minimum Volume Required	40-60 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	Sterile, screw-cap collection cup without additives. Provide 2 empty collection cups from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Liquid Chromatography/Mass Spectrometry (LC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Tetranitromethane (TNM) produces a stable breakdown product of 4-hydroxy-3-nitrophenylacetic acid (HNPAAC) in urine that can be detected using mass spectrometry to assess exposure to TNM.
Reference Range	Not Detected
CPT Code(s)	Not Applicable
LOINC Code	80663-8



Los Angeles County Public Health Laboratories

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Urine Metals Screen

Other Name(s)	
LIMS Code	TES
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Urine - clean-catch collected midstream
Minimum Volume Required	40-60 mL
Storage/Transport Conditions	Samples should be frozen at -20 °C as soon as possible. Ship frozen on dry ice unless otherwise directed.
Transport Medium	Sterile, screw-cap collection cup without additives Provide 2 empty collection cups from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide appropriate shipping manifest. Follow standard chain-of-custody protocols. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Inductively-Coupled Plasma/Mass Spectrometry (ICP/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	The ICP-MS method is used to measure the following elements in urine: Arsenic (As), Barium (Ba), Beryllium (Be), Cadmium (Ca), Lead (Pb), Thallium (Ti), and Uranium (U)
Reference Range	Test results are for epidemiological surveillance use only
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Volatile Organic Compounds, Blood

Other Name(s)	
LIMS Code	VOC
Pre-Approval Required	Approval is required from Emergency Preparedness and Response TAG coordinator. Use the PH emergency desk phone number 213-989-7140. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm LAC PHL Receipt of Property Chain of Custody form
Required Specimen Type(s)	Blood Collect specimens only from adults unless otherwise specified.
Minimum Volume Required	12 mL each tube type
Storage/Transport Conditions	Store samples at 2 - 8°C. Transport on cold packs.
Transport Medium	Three (3) lavender top EDTA and three (3) green top sodium heparin vacutainer tubes. Provide (2) empty EDTA and (2) sodium heparin vacutainer tubes from same lot number used in the specimen collection.
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact the Chemical Terrorism Response Unit at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234. For outside jurisdictions, work with your local public health department to arrange for transport to the Los Angeles County Public Health Laboratory and CDC. Provide package tracking number and notification of sample shipment to your local public health laboratory director and to Dr. Nicole Green, Los Angeles County Public Health Laboratory Director, at nicgreen@ph.lacounty.gov
Test Methodology	Gas Chromatography/Mass Spectrometry (GC/MS)
Turnaround Time	24 hours
Interferences & Limitations	
Additional Information	Measurement of Volatile Organic Compounds (VOC) in whole blood by headspace gas chromatography with mass selective detection. VOCs: 1,1,1-Trichloroethane, 1,4-Dichlorobenzene, 2-Butanone, Acetone, Benzene, Ethylbenzene, Styrene, Tetrachloroethene, Toluene, m-/p-Xylene, o-Xylene.
Reference Range	Reference range has not been determined. Percentile ranges for most VOCs in blood are as follows: 5 th Percentile (low end) is ND – 1.9 ppm, acetone is 640 ppm; 95 th Percentile (high end) is 0.25 – 17 ppm, acetone is > 6000 ppm. The health effects from exposure to low levels of VOCs are currently unclear.
CPT Code(s)	Not Applicable
LOINC Code	



Environmental Microbiology



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Aerobic Count (PAC), 3M Petrifilm

Other Name(s)	
LIMS Code	PAC - <i>Not currently built in SunQuest</i>
Pre-Approval Required	Yes
Supplemental Information and Required Form(s)	Los Angeles County Department of Public Health, Environmental Health, Food and Milk Program Form <i>H-1480 (Rev 12/09)</i>
Acceptable Specimen Type(s)	All dairy products including raw milk and liquid milk products, dried milk products, cheese, processed cheese, butter, margarine, frozen milk products, custard, desserts, and cream.
Minimum Volume Required	25g
Storage/Transport Conditions	Refrigerated: 0°- 4.4°C for miscellaneous samples such as process samples (see SMEDP 3.076) or refrigerated mixes.
Transport Medium	Tests for microbiological counts in all samples must begin within 48 hours of initial collection (not from pickup at a transfer location). Protect samples from contamination. It is recommended that samples be placed in waterproof bags so that the samples can be submerged in the ice without concern for contamination from the ice. Laboratories may refuse to officially analyze samples that are received submerged in ice water unless they are protected by a sealed plastic bag. Frozen: Routine samples. Use an appropriate refrigerant, preferably dry ice, to maintain samples in a frozen state (preferably –18°C or 0°F if not colder) until they are delivered to the laboratory. These samples must be promptly delivered to the laboratory. Dry samples: These samples may be shipped without refrigeration; however, they should be protected from moisture and temperature extremes.
Specimen Labeling	Sample ID, Date & Time of sample collection, Test requested
Shipping Instructions and Specimen Handling Requirements	
Test Methodology	SMEDP 6.040
Turnaround Time	3 days
Interferences & Limitations	Samples not received at the Public Health Laboratory within the “holding times” and temperatures listed above cannot be tested.
Additional Information	This method is used by the dairy industry for estimating the microbial populations in most types of dairy products and samples and for determining quality and sources of contamination at successive stages of processing.
Reference Range	The maximum standard allowable count for these samples is 75,000/gm. Any counts exceeding 75,000/gm are considered illegal.
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Coliform Count High-Sensitivity, 3M Petrifilm

Other Name(s)	
LIMS Code	HSCC - <i>Not currently built in SunQuest</i>
Pre-Approval Required	Yes
Supplemental Information and Required Form(s)	Los Angeles County Department of Public Health, Environmental Health, Food and Milk Program Form <i>H-1480 (Rev 12/09)</i>
Acceptable Specimen Type(s)	<ul style="list-style-type: none"> • Frozen yogurts • Non Dairy Desserts, Powder and Mixes • Dairy Desserts, Powder and Mixes
Minimum Volume Required	25 grams
Storage/Transport Conditions	Refrigerated: 0°- 4.4°C for miscellaneous samples such as process samples (see SMEDP 3.076), or refrigerated mixes.
Transport Medium	<p>Tests for microbiological counts in all samples must begin within 48 hours of initial collection (not from pickup at a transfer location).</p> <p>Protect samples from contamination. It is recommended that samples be placed in waterproof bags so that the samples can be submerged in the ice without concern for contamination from the ice.</p> <p>Laboratories may refuse to officially analyze samples that are received submerged in ice water unless they are protected by a sealed plastic bag.</p> <p>Frozen: Routine samples. Use an appropriate refrigerant, preferably dry ice, to maintain samples in a frozen state (preferably -18°C or 0°F if not colder) until they are delivered to the laboratory. These samples must be promptly delivered to the laboratory.</p> <p>Dry samples: These samples may be shipped without refrigeration; however, they should be protected from moisture and temperature extremes.</p>
Specimen Labeling	Sample ID, Date & Time of sample collection, Test requested
Shipping Instructions and Specimen Handling Requirements	
Test Methodology	SMEDP 7.072
Turnaround Time	2 days
Interferences & Limitations	Samples not received at the Public Health Laboratory within the “holding times” and temperatures listed above cannot be tested.
Additional Information	Coliforms isolated from pasteurized products suggest improper pasteurization and/or post-pasteurization contamination, indicating the presence of defective equipment or a need for improved equipment sanitation. This method is a ready-made plating procedure that consists of a culture medium made of two plastic films coated with modified Violet Red Bile (VRB) nutrients, a dehydrated cold water-soluble gelling agent, and a tetrazolium indicator that facilitates colony enumeration.
Reference Range	The maximum standard allowable count for these samples is 10/gm. Any counts exceeding 10/gm are considered illegal.
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Enterococci, E.coli and Total Coliforms Quantitation in Water

Other Name(s)	
LIMS Code	QNTT
Pre-Approval Required	Yes
Supplemental Information and Required Form(s)	Los Angeles County PHL Form <i>LAC-PHL-ENV-WTR-QC-002: BACTERIOLOGICAL EXAMINATION OF WATERS</i>
Acceptable Specimen Type(s)	Water
Minimum Volume Required	Drinking/ Potable: 100 mL Recreational (marine & fresh), Wastewater, Reclaimed water: 250 mL
Storage/Transport Conditions	<p>“Holding-time” is defined by the duration of time it takes from sampling of the water, to completing the initial analysis at the testing lab. This is the total time it takes to sample, transport, receive in the lab, and analyze. Please plan ahead so that we have enough time to process the samples. All regulated samples must be completed within 2-hours of receipt at the laboratory, so PLEASE NOTIFY THE LAB IN ADVANCE.</p> <ul style="list-style-type: none"> • Holding-time for Recreational Water is 8 hours. Temp 1-10°C • Holding-time for Drinking Water is 30 hours. Samples that take one hour or longer to be received at the lab (after sampling) must be chilled to <10°C. Temperature on receipt for these samples must be <10°C. • Holding-time for Wastewater is 6 hours.
Transport Medium	Sodium Thiosulfate if sample is chlorinated
Specimen Labeling	Sample ID, Date and Time of sample collection, if applicable
Shipping Instructions and Specimen Handling Requirements	All samples must be sealed or capped to keep them from contamination prior to analysis. They are to be inserted in a Ziploc® bag for protection and containment of any spillage. Temperature controls must accompany the samples. All transport containers must be Public Health Laboratory (PHL) and State Water Board's Environmental Laboratory Accreditation Program (ELAP) approved.
Test Methodology	IDEXX Quanti-Tray Most Probable Number (MPN)
Turnaround Time	24 hrs.
Interferences & Limitations	Samples not received at the Lab within the “holding times” listed above cannot be tested. Sample with Temp >10°C cannot be tested.
Additional Information	Quantitative enzyme substrate test for the presence of Enterococci, total coliforms and <i>E.coli</i> (fecal coliforms) in drinking, wastewater and recreation water.
Reference Range	<p>Beach water is considered Recreational water, and should be monitored for bacteria levels. Specifically, coliforms, E. coli, and enterococcus (fecal streptococci) have limits that are cited by EPA code AB 411, and are as follows:</p> <ul style="list-style-type: none"> • Coliforms: 10,000 /100ml • E. coli: 400 /100ml • Enterococcus: 104 /100ml
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Food Poisoning

Other Name(s)	
LIMS Code	FP
Pre-Approval Required	<p>Yes. Food sample submissions must be approved by the Acute Communicable Disease Control Program (213) 240-7941. Food specimens must be submitted with a Test Request Form. Food specimens may be tested for enteric pathogens such as <i>Salmonella</i>, <i>Shigella</i>, STEC, <i>Listeria</i>, <i>Vibrio</i> spp. <i>Clostridium perfringens</i>, etc...or for foodborne toxins such as staphylococcal enterotoxin toxin and botulism toxin.</p> <p>To report a suspected food related illness: https://www.visualcmr.net/webvcmr/pages/public/pub_FBI_Report.aspx or call the number listed above.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Acceptable Specimen Type(s)	Food Samples; Consult needed
Minimum Volume Required	25-100 g (depending on the food sample); Consult needed
Storage/Transport Conditions	Consult needed
Transport Medium	
Specimen Labeling	Sample ID, Date & Time collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Consult needed
Test Methodology	Conventional culture, MALDI-TOF, ELFA, Serological methods, PCR, Immunoassays
Turnaround Time	30 days
Interferences & Limitations	Not Applicable
Additional Information	Food Poisoning (outbreak investigation)
Reference Range	Not Applicable
CPT Code(s)	Not Applicable
LOINC Code	



Los Angeles County Public Health Laboratories

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Legionella, Environmental Samples

Other Name(s)	None
LIMS Code	LCH2O
Pre-Approval Required	Yes. Submission of samples are prearranged with the PH Laboratory to insure available testing staff and testing media. David Jensen, Section Chief – Clinical, Food & Environmental Bacteriology & Parasitology (562) 658-1488 djensen@ph.lacounty.gov
Supplemental Information and Required Form(s)	-Submit samples with test request using the <i>Los Angeles County PHL Test Request Form (H 3021)</i> : http://www.publichealth.lacounty.gov/lab/labforms.htm - Chain of Custody form (<i>LAC-PHL-ENV-LEG-S005 Appendix 3</i>) and collection list(s) should accompany PHL Test Requisition Form. - If no Chain of Custody Form is received with samples, initiate a form within the PHL at time of receipt to document samples received. - Collection lists (<i>LAC-PHL-ENV-LEG-S005 Appendix 2</i>) are often used to coordinate multiple samples for submission associated with a site investigation.
Acceptable Specimen Type(s)	<ul style="list-style-type: none"> • 1L of water • Swab (Dacron swab with non-wooded shaft)
Minimum Volume Required	1L water sample in sterile container with 0.5 ml of 0.1N sodium thiosulfate. For drinking or potable water, such as water fountains, faucets, and showerheads, collect two samples if possible. Collect the "pre-flush" sample by draining the first 1000 mL of water from the faucets or flush drains into a bottle. Allow the water to run for approximately 60 seconds (or longer) and collect the second draw of 1000 mL of water. The second sample is also called "post-flush" sample. Collect culture swabs of internal surfaces of faucets, aerators, and shower heads in a sterile, screw-top container (e.g., 50 mL plastic centrifuge tube). Submerge each swab in approximately 5 mL of sample water taken from the same device from which the sample was obtained.
Storage/Transport Conditions	Transport to the laboratory as soon as possible. Samples may be transported at room temperature but must be protected from temperature extremes. Samples not processed with 24 hours of collection should be refrigerated.
Transport Medium	Transfer in insulated container.
Specimen Labeling	Sample ID, Date and Time of sample collection, if applicable
Shipping Instructions and Specimen Handling Requirements	Schedule delivery during regular business hours M-F 8:00 am-5:00 pm. Personal safety and precautions should be observed during sampling. Avoid breathing aerosols that may be contaminated with Legionella bacteria. Avoid generating aerosols or water mists during sampling of the water system. Turn off the cooling tower fan during sampling, or wear a respirator equipped with a HEPA cartridge. Tightly cap the bottles. Make sure that water does not leak out during shipping and transporting. Place taped bottles in a clean plastic bag.
Test Methodology	Conventional culture, Gram stain, MALDI-TOF, Latex Agglutination
Turnaround Time	7 Days for negative, positives will require more time
Interferences & Limitations	Without the addition of sodium thiosulfate oxidizing biocides (chlorine, chlorine dioxide, bromine, ozone, iodine) will decrease the viability of Legionella in the water sample. If high amounts out silver or copper are known to be present, notify the lab as EDTA may need to be added.

Additional Information	Culture and Identification of Legionella spp. from Water and Environmental Samples
Reference Range	By Report
CPT Code(s)	Not Applicable
LOINC Code	TBD



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

12750 Erickson Avenue
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Phone (562) 658-1300 Fax (562) 401-5999

Yeast and Mold Rapid Count, 3M Petrifilm

Other Name(s)	
LIMS Code	Not currently built in SunQuest
Pre-Approval Required	Yes
Supplemental Information and Required Form(s)	Los Angeles County Department of Public Health, Environmental Health, Food and Milk Program Form <i>H-1480 (Rev 12/09)</i>
Acceptable Specimen Type(s)	Frozen yogurts (This method is suitable for use with all dairy products)
Minimum Volume Required	25g
Storage/Transport Conditions	Refrigerated: 0°- 4.4°C for miscellaneous samples such as process samples (see SMEDP 3.076) or refrigerated mixes.
Transport Medium	Tests for microbiological counts in all samples must begin within 48 hours of initial collection (not from pickup at a transfer location). Protect samples from contamination. It is recommended that samples be placed in waterproof bags so that the samples can be submerged in the ice without concern for contamination from the ice. Laboratories may refuse to officially analyze samples that are received submerged in ice water unless they are protected by a sealed plastic bag. Frozen: Routine samples. Use an appropriate refrigerant, preferably dry ice, to maintain samples in a frozen state (preferably -18°C or 0°F if not colder) until they are delivered to the laboratory. These samples must be promptly delivered to the laboratory. Dry samples: These samples may be shipped without refrigeration; however, they should be protected from moisture and temperature extremes.
Specimen Labeling	Sample ID, Date & Time of sample collection, Test requested
Shipping Instructions and Specimen Handling Requirements	
Test Methodology	SMEDP 8.112
Turnaround Time	5 days
Interferences & Limitations	Samples not received at the Public Health Laboratory within the “holding times” and temperatures listed above cannot be tested.
Additional Information	In cultured Dairy products, such as Yogurts, the finding of Yeast or Molds may indicate poor sanitary practices in handling these products. The presence of these organisms in cultured dairy products is usually interpreted as the result of contamination introduced by equipment and/or processing downstream of the pasteurizer. This method is a ready-made plating procedure that consists of a culture medium made of two plastic films coated with nutrients, antibiotics, a cold water-soluble gelling agent, and an indicator system that facilitates yeast and mold enumeration.
Reference Range	The maximum standard allowable count for these samples is 10/gm. Any counts exceeding 10/gm are considered illegal.
CPT Code(s)	Not Applicable
LOINC Code	



Molecular Diagnostics



Los Angeles County Public Health Laboratories

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***C. trachomatis/N. gonorrhoeae* NAAT for Endocervical Swab**

Other Name(s)	<i>Chlamydia trachomatis/Neisseria gonorrhoeae</i> (CT/GC) assay for Endocervical swab , APTIMA® Combo 2 Qualitative Assay
LIMS Code	ACCVX
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Endocervical swab
Minimum Volume Required	One swab in transport medium and tube.
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Unisex Swab Specimen Transport Tube for Endocervical and Male Urethral Swab Specimens (white label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Use the white swab to clean the area and discard swab. Only the blue swab should be used to collect specimen. After collecting specimen insert blue swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87491, 87591
LOINC Code	47362-9



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Chlamydia trachomatis/Neisseria gonorrhoeae NAAT for Rectal Swab

Other Name(s)	Chlamydia/Gonorrhea (CT/GC) assay from Rectal Swab , APTIMA® Combo 2 Qualitative Assay
LIMS Code	ACRCT
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Rectal swab
Minimum Volume Required	One swab in transport medium and tube.
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Multitest Swab Transport Media (orange label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	After collecting specimen insert swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87491, 87591
LOINC Code	47362-9



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***C. trachomatis/N. gonorrhoeae* NAAT for Urethral Swab**

Other Name(s)	<i>Chlamydia trachomatis/Neisseria gonorrhoea</i> (CT/GC) assay for male Urethral , APTIMA® Combo 2 Qualitative Assay
LIMS Code	ACURT
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Urethral swab
Minimum Volume Required	One swab in transport medium and tube
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Unisex Swab Specimen Transport Tube (white label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Only the blue swab should be used to collect specimen. After collecting specimen insert swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil top cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87491, 87591
LOINC Code	47362-9



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***Chlamydia trachomatis/Neisseria gonorrhoeae* NAAT for Urine**

Other Name(s)	<i>Chlamydia/Gonorrhea</i> (CT/GC) assay for Urine , APTIMA® Combo 2 Qualitative Assay
LIMS Code	ACURN
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Urine
Minimum Volume Required	2 ml
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 30 days for urine at 2-30°C
Transport Medium	APTIMA® Urine Specimen Transport Tube (yellow label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Collect first void urine in urine collection cup. Mix urine. Transfer 2 ml urine into Aptima® urine collection kit (approximately 4 ml total volume) within 24 hours of collection. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87491, 87591
LOINC Code	47362-9



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***C. trachomatis/N. gonorrhoeae* NAAT for Vaginal Swab**

Other Name(s)	<i>Chlamydia trachomatis/Neisseria gonorrhoea</i> (CT/GC) assay, Vaginal , APTIMA® Combo 2 Qualitative Assay
LIMS Code	ACVAG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Vaginal swab
Minimum Volume Required	One swab in transport medium and tube
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	Aptima® Multitest Swab Transport Media (orange label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Must have at least two unique patient identifier on the tube
Shipping Instructions and Specimen Handling Requirements	After collecting specimen insert swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87491, 87591
LOINC Code	47362-9



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Hepatitis C Viral RNA, Qualitative, TMA

Other Name(s)	APTIMA HCV RNA Qualitative, Transcription Mediated Amplification (TMA)
Test Code	HCVNAT
Pre-Approval Required	Documentation of positive Hepatitis C antibody screen is required
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Lavender top EDTA plasma or red top serum specimens in plastic vacutainer tubes
Minimum Volume Required	2 mL
Storage/Transport Conditions	Centrifuged whole blood may be held at room temperature up to 24 hours. Do not freeze. Processed serum or plasma may be held at 2 to 8°C for up to 48 hours. For longer periods at or below -20°C (preferred). Transport on cold packs or frozen.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Freshly drawn whole blood may be held at 2 to 30°C for up to 6 hours prior to centrifugation. After centrifugation, remove plasma or serum from cells and transfer to polypropylene screw cap tube. Ship specimens on cold packs or frozen on dry ice. Specimens should be packaged and labeled in compliance with applicable state and federal regulations covering the transport of clinical specimens and etiologic agents/infectious substances.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	2-3 business days
Interferences & Limitations	This assay has not been FDA-approved for the screening of blood or plasma donors. Detection of HCV RNA does not discriminate between acute and chronic states of infection. A negative result does not exclude active HCV replication. This test should not be used for monitoring HCV infected patients. Exposure of plasma or serum samples to elevated room temperature for more than 6 hours or longer should be avoided. Multiple freeze/thaw cycles should be avoided.
Additional Information	Ordered after Hepatitis C positive antibody screen and used to differentiate active from resolved infection in HCV-antibody positive individuals This is also a reflex test for Hepatitis C antibody screen (CPT 86803) for specimens tested at the Public Health Laboratories.
Reference Range	Not Detected
CPT Code(s)	87521
LOINC Code	11259-9



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Hepatitis C Virus, Qualitative and Quantitative, NAAT

Other Name(s)	APTIMA Hepatitis C Quant Dx, Hepatitis C Viral RNA Detection and Quantitation
LIMS Code	HCVQDX
Pre-Approval Required	Documentation of positive Hepatitis C Antibody screen is required.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect in gold top serum separator tube or red top. Plasma: Collect in lavender top K ₂ EDTA tube
Minimum Volume Required	2 mL processed serum or plasma
Storage/Transport Conditions	Whole blood specimens should be centrifuged within 6 hours after collection and plasma or serum transferred to a screw-cap polypropylene tube. Separated plasma or serum should be submitted in a biohazard specimen bag on cold pack. Frozen specimens should be submitted in a biohazard specimen bag on dry ice. If needed, separated plasma or serum may be stored: <ul style="list-style-type: none"> • At 2 to 25°C for up to 24 hours • At 2 to 8°C for up to 5 days • At – 20°C for up to 60 days
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	See Storage/Transport Conditions above. Specimens should be packaged and labeled in compliance with applicable state and federal regulations covering the transport of clinical specimens and etiologic agents/infectious substances.
Test Methodology	Transcription Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Detection of HCV RNA does not discriminate between acute and chronic states of infection.
Additional Information	The quantitative range of this assay is 1.0-8.0 log IU/mL (10-100,000,000 IU/mL) with limit of detection (LOD) at 3.9 IU/mL for plasma and 3.4 IU/mL for serum. This test can be used for both detection and quantitation of HCV RNA.
Reference Range	Not Detected
CPT Code(s)	87521, 87522
LOINC Code	11259-9; 11011-4; 38180-6



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HIV-1 RNA, Qualitative, Transcription Mediated Amplification

Other Name(s)	APTIMA HIV-1 RNA Qualitative Assay
LIMS Code	HIVNAA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Lavender top EDTA plasma or red top serum specimens in plastic vacutainer tubes
Minimum Volume Required	2 mL
Storage/Transport Conditions	Centrifuged whole blood may be held at room temperature up to 24 hours. Do not freeze. Processed serum or plasma may be held at 2 to 8°C for up to 48 hours. For longer periods at or below -20°C (preferred). Transport on cold packs or frozen.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Freshly drawn whole blood may be held at 2 to 30°C for up to 6 hours prior to centrifugation. After centrifugation, remove plasma or serum from cells and transfer to polypropylene screw cap tube. Ship specimens on cold packs or frozen on dry ice. Specimens should be packaged and labeled in compliance with applicable state and federal regulations covering the transport of clinical specimens and etiologic agents/infectious substances.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	2-3 business days
Interferences & Limitations	This assay has not been FDA-approved for the screening of blood or plasma donors. A negative result does not exclude HIV infection. Specimen that are nonreactive in the APTIMA HIV-1 RNA Qualitative Assay and repeatedly reactive in a test for HIV-1 antibodies should be tested by additional methods to confirm the presence of HIV-1 antibodies. The individual should be referred for medical follow-up and additional testing. This test should not be used for monitoring HIV-1 infected patients. Exposure of plasma or serum samples to elevated room temperature for more than 6 hours or longer should be avoided. Multiple freeze/thaw cycles should be avoided.
Additional Information	Ordered after HIV-1 positive antibody screen and used to diagnose HIV-1 before seroconversion, confirm HIV-1 infection in antibody positive patients, or resolve indeterminate HIV-1 antibody test results This is also a reflex test for indeterminate HIV 1/2 differentiation assay (CPT 86701, 86702) for specimens tested at the Public Health Laboratories.
Reference Range	Not Detected
CPT Code(s)	87535
LOINC Code	25835-0



Los Angeles County Public Health Laboratories

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Neisseria gonorrhoeae NAAT for Throat Swab

Other Name(s)	<i>Gonorrhea</i> (GC) from Throat , APTIMA® COMBO 2 Qualitative Assay
LIMS Code	ACTHR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Throat swab
Minimum Volume Required	One swab in transport medium and tube.
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Multitest Swab Transport Media (orange label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	After collecting specimen insert swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foiltop cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Adhere to product insert of APTIMA® Specimen Collection Kit for detailed instructions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87591
LOINC Code	47362-9



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***Trichomonas vaginalis* NAAT for Endocervical Swab**

Other Name(s)	<i>Trichomonas vaginalis</i> RNA, Qualitative Transcription Mediated Amplification
LIMS Code	TVCVX
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Endocervical swab
Minimum Volume Required	One swab in transport medium and tube.
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Unisex Swab Specimen Transport Tube (white label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Use the white swab to clean the area and discard swab. Only the blue swab should be used to collect specimen. After collecting specimen insert blue swab into collection tube (with buffer solution) and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Refer to package insert of APTIMA® Specimen Collection Kit for detailed directions
Additional Information	None
Reference Range	Negative
CPT Code(s)	87661
LOINC Code	70166-4



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Trichomonas vaginalis NAAT for Urine

Other Name(s)	<i>Trichomonas vaginalis</i> RNA, Qualitative, Transcription Mediated Amplification
LIMS Code	TVURN
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Urine
Minimum Volume Required	2 mL
Storage/Transport Condition	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 30 days for urine at 2-30°C
Transport Medium	Aptima® Urine Specimen Transport Tube (yellow label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Collect female first void urine in sterile urine collection cup. Mix and transfer 2 ml of urine to the Aptima® urine specimen transport tube within 24 hours of collection. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription –Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Refer to package insert of APTIMA® Specimen Collection Kit for detailed directions
Additional Information	None
Reference Range	Negative
CPT Code(s)	87661
LOINC Code	70167-2



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Trichomonas vaginalis NAAT for Vaginal Swab

Other Name(s)	<i>Trichomonas vaginalis</i> RNA, Qualitative, Transcription Mediated Amplification
LIMS Code	TVVAG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Vaginal swab
Minimum Volume Required	One swab in transport medium and tube
Storage/Transport Conditions	Transport at refrigerated or ambient temperatures (2-30°C). Specimens are stable up to 60 days at 2-30°C
Transport Medium	APTIMA® Multitest Swab Transport Media (orange label)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	After collecting specimen insert swab into collection tube (with buffer solution) and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Do not touch the foil cap. Transport at 2-30°C.
Test Methodology	Transcription-Mediated Amplification (TMA)
Turnaround Time	4 business days
Interferences & Limitations	Refer to package insert of APTIMA® Specimen Collection Kit for detailed directions.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87661
LOINC Code	70165-6



Molecular Epidemiology



Los Angeles County Public Health Laboratories

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2019-Novel CoV RNA, Qualitative Real-Time PCR

Other Name(s)	2019 Novel Coronavirus
LIMS Code	NCOV
Pre-Approval Required	<p>This test is to be performed only using respiratory specimens collected from individuals who meet CDC criteria for 2019-nCoV testing.</p> <p>For Los Angeles County, prior approval is required from the Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist in consultation with the California Department of Public Health (CDPH) and Centers for Disease Control and Prevention (CDC). ACDC can be contacted by calling 213-240-7941 during business hours. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.</p> <p>For outside jurisdictions, approval is required from the local health department in consultation with CDPH and CDC.</p>
Supplemental Information and Required Form(s)	<ol style="list-style-type: none"> Los Angeles County PHL Test Request Form: http://www.publichealth.lacounty.gov/lab/labforms.htm Los Angeles County 2019 novel coronavirus (2019-nCoV) patient under investigation (PU) form: To be completed by Acute Communicable Disease Control (ACDC)
Required Specimen Type(s) <i>Collect all three specimen types: Lower respiratory, Upper respiratory, and serum specimens</i>	<p>A. Lower Respiratory Tract Specimens: Bronchoalveolar lavage, tracheal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.</p> <p>Sputum: Have the patient rinse the mouth with water and then expectorate 2-3 mL of deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.</p> <p>B. Upper Respiratory Tract Specimens: Nasopharyngeal (NP) 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. Place swabs immediately into sterile tubes containing 2-3 ml of viral transport media.</p> <p>Oropharyngeal (OP) swab*: Swab the posterior pharynx, avoiding the tongue. Place swabs immediately into sterile tubes containing 2-3 ml of viral transport media.</p> <p>*Note: NP and OP specimens should be collected separately.</p> <p>Nasopharyngeal wash/aspirate or nasal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.</p> <p>Note: In some cases, additional specimens including serum, urine, and stool may be requested.</p>
Minimum Volume Required	For all specimens: 2-3 mL
Storage/Transport Conditions	Store specimens at 2-8°C for up to 72 hours after collection. If a delay in testing or shipping is expected, store specimens at -70°C or below.
Transport Medium	Acceptable transport media includes viral transport media, universal transport media, liquid amies, and saline. Other specimens must be in sterile containers.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable

Shipping Instructions and Specimen Handling Requirements	Do not send specimens without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact PHL at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Reverse-Transcriptase Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	2 days
Interferences & Limitations	Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do not use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. Negative results do not preclude 2019-nCoV infection and should not be used as the sole basis for treatment or other patient management decisions. Negative results must be combined with clinical observations, patient history, and epidemiological information.
Additional Information	2019 Novel Coronavirus Real-time RT-PCR method developed by the Centers for Disease Control and Prevention and approved by the U.S. Food and Drug Administration under emergency use authorization.
Reference Range	Not Detected
CPT Code(s)	87635
LOINC Code	94309-2



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

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Foodborne Disease Surveillance

Other Name(s)	Whole genome sequencing, WGS, Sequencing and Analysis
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture isolates
Minimum Volume Required	N/A
Storage/Transport Conditions	Keep specimen at a refrigerated temperature until ready for shipping
Transport Medium	Agar slant. Do not submit an agar plate.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship isolates at room temperature. Ship overnight, Monday through Thursday, for delivery within 24 hours of collection
Test Methodology	Whole genome sequencing
Turnaround Time	7 days
Interferences & Limitations	The methods used, and the results reported are for surveillance purposes only.
Additional Information	WGS surveillance is used for the following foodborne disease organisms: <i>Salmonella</i> , <i>Shigella</i> , <i>Escherichia coli</i> , and <i>Listeria</i> .
Reference Range	By Report
CPT Code(s)	TBD
LOINC Code	TBD



Los Angeles County Public Health Laboratories

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Gastro Intestinal Multiplex Panel, Qualitative Real-time PCR

Other Name(s)	Biofire GI Panel, Multiplex PCR
LIMS Code	MGIP
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Stool
Minimum Volume Required	1 gram
Storage/Transport Conditions	Refrigerate specimen after collection. Submit to the laboratory within 72 hours after collection. Transport on cold packs.
Transport Medium	Cary Blair transport media
Specimen Labeling	Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship and transport of specimens via courier. Contact the Shipping and Receiving department to arrange pickup (562) 658-1460.
Test Methodology	Multiplex Qualitative PCR
Turnaround Time	1-2 days
Interferences & Limitations	Only use specimen collection tubes provided by the Public Health Laboratory. For supplies contact the Shipping and Receiving department at (562) 658-1341.
Additional Information	Bacteria tested: <i>Campylobacter</i> , <i>C.difficile</i> , <i>P.shigelloides</i> , <i>Salmonella</i> , <i>Vibrio</i> , <i>Y.enterocolitica</i> , Diarrheagenic <i>E.coli/Shigella</i> , Enteroaggregative <i>E.coli</i> , Enteropathogenic <i>E.coli</i> , Enterotoxigenic <i>E.coli</i> , Shiga-like toxin producing <i>E.coli</i> (STEC), <i>Shigella</i> /Enteroinvasive <i>E.coli</i> Parasites tested: <i>Cryptosporidium</i> , <i>Cyclospora cayetanensis</i> , <i>Entamoeba histolytica</i> , <i>Giardia lamblia</i> . Viruses tested: <i>Adenovirus</i> , <i>Astrovirus</i> , <i>Norovirus</i> , <i>Rotavirus A</i> , <i>Sapovirus</i>
Reference Range	Not Detected
CPT Code(s)	87507
LOINC Code	82195-9



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

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Influenza Type A and B, Qualitative Real-Time RT-PCR with Reflex

Other Name(s)	Influenza A and B RNA, Real-Time Reverse-Transcriptase PCR, with Reflex to Influenza Virus Subtype or Lineage Differentiation, Flu
LIMS Code	FLUPCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Nasopharyngeal Swab
Minimum Volume Required	3 mL
Storage/Transport Conditions	Store refrigerated after collection. Transport on cold packs. Submit within 24-48 hours after collection. Frozen specimens ship frozen (-20C through -70C). Transport on dry ice.
Transport Medium	Universal viral transport medium
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship and transport of specimens via courier. Contact the Shipping and Receiving department to arrange pickup (562) 658-1341
Test Methodology	Real-Time Reverse-Transcriptase- PCR
Turnaround Time	4 days
Interferences & Limitations	
Additional Information	If Influenza A RNA, PCR result is detected, Influenza virus subtype A/H1, A/H3, A/H5, and A/ 2009 H1 Real-Time RT-PCR will be performed. If Influenza B RNA, PCR result is detected, Influenza B/Yamagata or Influenza B/Victoria lineage will be performed.
Reference Range	Not Detected
CPT Code(s)	Influenza A (87502); Influenza B (87502)
LOINC Code	48509-4



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Mycobacterium tuberculosis DNA, Qualitative Real-Time PCR

Other Name(s)	<i>M. tuberculosis</i> Real-time PCR assay for clinical samples
LIMS Code	MTBPCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	<p>A. Upper Respiratory Specimens</p> <ul style="list-style-type: none"> • Expectorated or Induced Sputum • Bronchial or Tracheal Aspirates • Bronchoalveolar Lavage <p>B. Extra Pulmonary Specimens</p> <ul style="list-style-type: none"> • Body fluids including: ascitic fluid, pericardial fluid, pleural fluid • Biopsy specimens including: fine needle aspirates, lung, lymph node, bone marrow, thoracentesis and trans-bronchial biopsies • Abscess and lesion material <p>Refer to Acid-Fast Smear and Culture Test for specimen criteria</p>
Minimum Volume Required	<p>A. 3 mL for Upper Respiratory Specimens</p> <p>B. 1 mL for Extra Pulmonary Specimens</p>
Storage/Transport Conditions	Refrigerate specimens after collection. Submit to the laboratory within 48 hours after collection. Transport at Room Temperature.
Transport Medium	Sputocol sputum collection kit for upper respiratory specimens. 50 ml sterile conical tube for all other specimen types.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Triple contained. Sterile, leak-proof, 50 mL conical tube preferred for primary container.
Test Methodology	Real-Time Polymerase Chain Reaction (PCR)
Turnaround Time	2-4 days
Interferences & Limitations	<p>This test should always be performed in conjunction with mycobacterial culture.</p> <p>The performance of this test has not been evaluated for samples from patients being treated with anti-tuberculous agents. It should not be used to monitor response to therapy. Test should be requested prior to anti-TB treatment.</p> <p>A negative result does not rule out the presence of <i>Mycobacterium tuberculosis</i> complex or active disease because the organism may be present at levels below the limit of detection for this assay.</p>
Additional Information	None
Reference Range	Not Detected
CPT Code(s)	87556
LOINC Code	38379-4



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Norovirus Real Time PCR

Other Name(s)	Cepheid Xpert Norovirus Assay
LIMS Code	NORPCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form
Acceptable Specimen Type(s)	Stool collected during the acute phase of illness, within 48 - 72 hours after onset. Raw stool in sterile container
Minimum Volume Required	1 mL or 1 gram
Storage/Transport Conditions	Store refrigerated. Transport immediately on cold pack within 24 hours.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	No special requirement.
Test Methodology	Reverse Transcriptase Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	2 business days
Interferences & Limitations	Assay interference may be observed in the presence of barium sulfate and benzalkonium chloride.
Additional Information	For outbreaks, please alert the laboratory as additional forms are needed. Special staffing arrangements may need to be established.
Reference Range	Not Detected
CPT Code(s)	87798 x 2
LOINC Code	88701-8, 54905-5, 54906-3



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Norovirus Genotyping

Other Name(s)	Norovirus genogroups I and II RNA panel-stool by NAA with probe detection
LIMS Code	Not Applicable
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Raw stool collected in the acute phase of illness, 48-72 hours after symptoms start. Samples must be positive by Norovirus PCR.
Minimum Volume Required	1 mL or 1 gram
Storage/Transport Conditions	Store and transport to laboratory on cold packs. Specimens can be stored refrigerated for 24-48 hours.
Transport Medium	Sterile container (no preservative)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Specimens must be shipped in a sealed bag and kept cold with cold packs in an insulated container during transport.
Test Methodology	Viral RNA Genetic Sequencing Analysis, Polymerase Chain Reaction
Turnaround Time	14 Days
Interferences & Limitations	None
Additional Information	
Reference Range	Not Detected
CPT Code(s)	87798
LOINC Code	88701-8



COUNTY OF LOS ANGELES

Public Health

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Pertussis, Qualitative Real-Time PCR with reflex

Other Name(s)	Whooping Cough, Respiratory bacterial and viral multi-plex panel
LIMS Code	PPCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Nasopharyngeal swab
Minimum Volume Required	3 mL
Storage/Transport Conditions	Store samples at 2-8 °C using biohazard specimen bag. Specimen should be sent on cold pack.
Transport Medium	Universal viral transport medium
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	Send specimen by courier on cold pack or ship by mail as UN3373 Biological substance, Category B
Test Methodology	Nanosphere Verigene RP Flex (multiplex qualitative RT-PCR, PCR, and microarray hybridization)
Turnaround Time	5 business days
Interferences & Limitations	Negative specimens may contain respiratory viruses and/or bacteria other than those included in the assay. Some strains of enterovirus may be detected as rhinovirus. Performance of the assay has not been established for immunocompromised individuals. Recent immunization with the intranasal Influenza vaccine may produce false positive results for Influenza A and or Influenza B.
Additional Information	This test detects <i>B. pertussis</i> , <i>B. parapertussis</i> / <i>brochiseptica</i> , <i>B. holmesii</i> .and the respiratory viral targets: Adenovirus, Human Metapneumovirus, Influenza A, Influenza A (subtype H1), Influenza A (subtype H3), Influenza B, Parainfluenza 1-4, Respiratory Syncytial Virus A, Respiratory Syncytial Virus B, and Rhinovirus.
Reference Range	Not Detected
CPT Code(s)	87798 x 3; 87633
LOINC Code	78922-2



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Respiratory Multiplex Panel, Qualitative Real-time PCR

Other Name(s)	Biofire Respiratory Panel, Multiplex PCR
LIMS Code	MRPP
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Nasopharyngeal Swab
Minimum Volume Required	3 mL
Storage/Transport Conditions	Refrigerate specimens after collection. Submit within 72 hours. Transport on cold packs. Specimen can also be frozen at -70°C. If specimen is frozen, it must be transported on dry ice.
Transport Medium	Universal transport medium (UTM) or viral transport medium (VTM)
Specimen Labeling	Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship and transport of specimens via courier. Contact the Shipping and Receiving department to arrange pickup (562) 658-1460.
Test Methodology	Multiplex Qualitative PCR
Turnaround Time	1-2 days
Interferences & Limitations	Only use specimen collection tubes provided by the Public Health Laboratory. For supplies contact the Shipping and Receiving department at (562) 658-1341.
Additional Information	Respiratory viruses include: Adenovirus, Coronavirus 229E, Coronavirus HKU1, Coronavirus NL63, Coronavirus OC43, Human Metapneumovirus, Influenza A, Influenza A/H1, Influenza A/H3, Influenza A/H1-2009, Influenza B, Parainfluenza 1, Parainfluenza 2, Parainfluenza 3, Parainfluenza 4, Respiratory Syncytial Virus, Human Rhinovirus, Enterovirus Bacteria include: Bordetella pertussis, Chlamydomphila pneumoniae and Mycoplasma pneumoniae.
Reference Range	Not Detected
CPT Code(s)	87633, 87798, 87486, 87581
LOINC Code	Respiratory Panel (82159-5), Adenovirus (82160-3), Coronavirus HKU1 (82161-1), Coronavirus NL63 (82162-9), Coronavirus 229E (82163-7), Coronavirus OC43 (82164-5), Human Metapneumovirus (82165-2), Influenza A (82166-0), Influenza A/H1 (49521-8), Influenza A/H3 (49524-2), Influenza A/H1-2009 (60494-2), Influenza B (82170-2), Parainfluenza virus 1 (82171-0), Parainfluenza virus 2 (82172-8), Parainfluenza Virus 3 (82173-6), Parainfluenza Virus 4 (82174-4), Human Rhinovirus/Enterovirus (82175-1), Respiratory Syncytial Virus (82176-9), Mycoplasma pneumoniae (82177-7), Chlamydomphila pneumoniae (82178-5), Bordetella pertussis (82179-3).



Los Angeles County Public Health Laboratories

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SARS-CoV-2 RNA, Qualitative Real-Time PCR

Other Name(s)	2019 Novel Coronavirus, COVID-19
LIMS Code	COVID
Pre-Approval Required	<p>This test is to be performed only using respiratory specimens collected from individuals who meet CDC criteria for COVID-19 testing.</p> <p>For Los Angeles County, prior approval is required from the Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist in consultation with the California Department of Public Health (CDPH) and Centers for Disease Control and Prevention (CDC). ACDC can be contacted by calling 213-240-7941 during business hours. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.</p> <p>For outside jurisdictions, approval is required from the local health department in consultation with CDPH and CDC.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form: http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Required Specimen Type(s)	<p>Upper Respiratory Tract Swab Specimens</p> <ul style="list-style-type: none"> - Nasopharyngeal (NP) swab - Oropharyngeal (OP) swab - Nasal swab - Combination of upper respiratory swabs <p>Lung Swab</p>
Minimum Volume Required	For all specimens: 1-3 mL
Storage/Transport Conditions	Refrigerate specimens at 2-8°C and transport to PHL on cold packs as soon as possible within 72 hours after collection.
Transport Medium	Swabs must be in viral transport media, eSwab Liquid Amies media, saline.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	<p>Do not send specimens without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory.</p> <p>In Los Angeles County, contact PHL at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.</p>
Test Methodology	Reverse-Transcriptase Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	2 days
Interferences & Limitations	<p>Use polyester-, rayon-, or nylon-tipped swab with plastic shafts or if available, flocked swabs. Do not use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. Negative results do not preclude COVID-19 infection and should not be used as the sole basis for treatment or other patient management decisions. Negative results must be combined with clinical observations, patient history, and epidemiological information.</p>
Additional Information	Panther Fusion® SARS-CoV-2 Assay is a real-time RT-PCR developed by Hologic Inc. for the qualitative detection of RNA from SARS-CoV-2 isolated and purified from respiratory specimens obtained from individuals who meet COVID-19 clinical and/or epidemiological criteria. It is for use only under EUA.
Reference Range	Not Detected
CPT Code(s)	87635
LOINC Code	94559-2



Los Angeles County Public Health Laboratories

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SARS-CoV-2 RNA, Qualitative Isothermal Amplification

Other Name(s)	2019 Novel Coronavirus
LIMS Code	COVIA
Pre-Approval Required	<p>This test is to be performed only using respiratory specimens collected from individuals who meet CDC criteria for COVID-19 (SARS-CoV-2) testing.</p> <p>For Los Angeles County, prior approval is required from the Los Angeles County Acute Communicable Disease Control (ACDC) medical epidemiologist. ACDC can be contacted by calling 213-240-7941 during business hours. After hours, weekends, or holidays contact the County Operator and ask for the administrator on duty (AOD) at 213-974-1234.</p> <p>Contact PHL for instructions on specimen collection and transport.</p> <p>For outside jurisdictions, approval is required from the local health department in consultation with CDPH and CDC.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form: http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Required Specimen Type(s)	<p>Submitter must contact PHL to obtain instructions on specimen collection and transport. See contact information in the “Shipping Instructions and Specimen Handling Requirements” section.</p> <p>This test can only be performed on a direct throat, nasal, or nasopharyngeal swab transported to PHL using a sterile conical tube <u>without</u> placing in a transport medium. Swabs in any transport medium submitted for this test will be rejected.</p> <p>Throat swab: Foam, polyester, HydraFlock® and nylon flocked throat swabs can be used to collect throat swab samples. Rayon swabs are not suitable for use in this assay. Collect patient specimen by swabbing the posterior pharynx, tonsils and other inflamed areas. Avoid touching the tongue, cheeks and teeth with the swab. Place the swab in a sterile conical tube and cap tightly.</p> <p>Nasal swab: Rayon, foam, HydraFlock® Flocked swab (standard tip), HydraFlock® Flocked swab (mini tip), Copan Mini Tip Flocked Swab, or Copan Standard Flocked swabs can be used to collect nasal swab samples. Puritan PurFlock Standard Tip Ultra Flocked Swabs, Puritan PurFlock Mini Tip Ultra Flocked Swabs and Copan Standard Rayon Tip Swabs are not suitable for use in this assay. To collect a nasal swab sample, carefully insert the swab into the nostril exhibiting the most visible drainage, or the nostril that is most congested if drainage is not visible. Using gentle rotation, push the swab until resistance is met at the level of the turbinates (less than one inch into the nostril). Rotate the swab several times against the nasal wall then slowly remove from the nostril. Using the same swab, repeat sample collection in the other nostril. Place the swab in a sterile conical tube and cap tightly.</p> <p>Nasopharyngeal swab: Use sterile rayon, foam, polyester or flocked flexible-shaft NP swabs to collect a nasopharyngeal sample. To collect a nasopharyngeal swab sample, carefully insert the swab into the nostril exhibiting the most visible drainage, or the nostril that is most congested if drainage is not visible. Pass the swab directly backwards without tipping the swab head up or down. The nasal passage runs parallel to the floor, not parallel to the bridge of the nose. Using gentle rotation, insert the swab into the anterior nare parallel to the palate advancing the swab into the nasopharynx, leave in place for a few seconds, and then slowly rotate the swab as it is being withdrawn. To ensure proper collection, the swab should be passed a distance that is halfway of that from the nose to</p>

	the tip of the ear. This is about half the length of the swab. DO NOT USE FORCE while inserting the swab. The swab should travel smoothly with minimal resistance; if resistance is encountered, withdraw the swab a little bit without taking it out of the nostril. Then elevate the back of the swab and move it forward into the nasopharynx. Place the swab in a sterile conical tube and cap tightly.
Minimum Volume Required	N/A
Storage/Transport Conditions	Refrigerate specimens at 2-8°C and transport to PHL on cold packs as soon as possible within 24 hours after collection.
Transport Medium	DO NOT place the swab in a transport medium. Place the swab in a sterile conical tube.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	Do not send specimens without prior consultation, approval, and notification to the Los Angeles County Public Health Laboratory. In Los Angeles County, contact PHL at (562) 658-1330 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Isothermal Nucleic Acid Amplification
Turnaround Time	1 day
Interferences & Limitations	Use only swabs specified in the Required Specimen Type(s) section. Place the swab in a sterile conical tube immediately after collection. Negative results do not preclude COVID-19 (SARS-CoV-2) infection. For all negative results, PHL will request an additional specimen to be collected for 2019-Novel CoV RNA, Qualitative Real-Time PCR Test (NCOV).
Additional Information	Negative results are presumptive and do not preclude SARS-CoV-2 infection. A new specimen should be submitted for 2019-Novel CoV RNA, Qualitative Real-Time PCR Assay. Negative results should not be used as the sole basis for patient management decisions and must be combined with clinical observations, patient history, and epidemiological information. ID NOW COVID-19 assay is a rapid molecular <i>in vitro</i> diagnostic test developed by Abbott Diagnostics Scarborough, Inc., utilizing an isothermal nucleic acid amplification technology intended for the qualitative detection of nucleic acid from the SARS-CoV-2 viral RNA in direct nasal, nasopharyngeal or throat swabs from individuals who are suspected of COVID-19 by their healthcare provider. It is approved by the U.S. Food and Drug Administration under emergency use authorization (EUA).
Reference Range	Not Detected
CPT Code(s)	87635
LOINC Code	94534-5



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Zika, Chikungunya, Dengue, Qualitative Real-time PCR

Other Name(s)	Triplex Real-time PCR
LIMS Code	TRPCR
Pre-Approval Required	Submit request for approval
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Approved Specimen Type(s)	Zika, Chikungunya and Dengue testing: Serum (preferred specimen) Cerebrospinal Fluid (only tested alongside a patient matched serum specimen) Zika testing only: Urine(only tested alongside a patient matched serum specimen) Amniotic fluid(only tested alongside a patient matched serum specimen)
Minimum Volume Required	0.5 mL
Storage/Transport Conditions	Serum: Centrifuge prior to shipping. Ship at room temp. CSF: Ship with dry ice or cold packs. Urine: Ship with dry ice or cold packs Amniotic fluid: Ship with dry ice or cold packs
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	Ship and transport of specimens via courier. Contact the Shipping and Receiving department to arrange pickup (562) 658-1341
Test Methodology	RT-PCR, Reverse Transcriptase
Turnaround Time	4 days
Interferences & Limitations	Must meet testing criteria and approved prior to testing.
Additional Information	For emergency authorization use only
Reference Range	Negative
CPT Code(s)	87662 (Zika); 87798 (Chikungunya); 87798 (Dengue)
LOINC Code	81154-7



Mycobacteriology



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Acid-Fast Bacillus Smear Only

Other Name(s)	Acid-Fast Smear for Mycobacterium
LIMS Code	AFSM
Pre-Approval Required	(NONE)
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	<p>Specimen Type: Sputum (expectorated) Container/Tube: Sputocol™ sputum collection kit (preferred) or sterile 50-mL conical tube (Polypropylene) Specimen Volume: 5-10 mL is optimum; minimum desired volume is 3 mL. Collection Instructions: For initial diagnosis of pulmonary TB, collect three consecutive sputum specimens, before chemotherapy is begun, in 8- to 24-hours intervals, with at least one being an early morning specimen. The sample collected should be exudative material brought up from the lungs after a deep productive cough to produce a lower respiratory secretion with minimal saliva.</p> <p>Specimen Type: Sputum (Induced) Container/Tube: Sputocol™ sputum collection kit (preferred) or sterile 50-mL conical tube (Polypropylene) Specimen Volume: 5-10 mL is optimum. Collection Instructions: Sputum induction may be considered for patients that have a difficulty producing a sputum specimen. The inhalation of warm aerosolized hypertonic (5%-10%) irritates the lungs enough to induce, both coughing and the production of a thin watery, specimen. The specimen should be a clearly labeled "Induced" on the request form or on-line since due to its watery appearance it could be mistaken for saliva.</p> <p>Specimen Type: Lower bronchoalveolar lavage, bush or wash, endotracheal aspirate, transtracheal aspirate Container/Tube: Sterile 50 mL conical tube (Polypropylene) Specimen Volume: 5-10 mL is optimum. Collection Instructions: collect washing or aspirate in a sputum trap and place brush in a sterile properly capped leak-proof container with up to 5 mL of sterile saline.</p> <p>Specimen Type: Body fluid (abdominal, amniotic, ascites, bile, joint, paracentesis, pericardial, peritoneal, pleural, synovial, thoracentesis) Container/Tube: Sterile 50 mL conical tube (Polypropylene) Specimen Volume: 10 mL or more is recommended. Collection Instructions: Aseptically collect 10 mL or more of fluid in a sterile container. Always submit as much fluid as possible; never submit a swab dipped in fluid.</p> <p>Specimen Type: Tissue/lymph node Container/Tube: Sterile 50 mL conical tube (Polypropylene) Specimen Volume: Always submit as much tissue as possible; minimum 1 gram. Add 2 to 3 mL of sterile saline. Collection Instructions: Aseptically collect during surgery or cutaneous biopsy procedure.</p> <p>Specimen Type: Urine, including collections from a catheter. Container/Tube: Sterile 50 mL conical tube (Polystyrene) Specimen Volume: 40 mL is recommended.</p>

	<p>Collection Instructions: A first morning midstream specimen is preferred. Do not pool urine specimens or use preservatives.</p> <p>Specimen Type: Gastric wash or lavage</p> <p>Container/Tube: Sterile 50 mL conical tube (Polypropylene)</p> <p>Specimen Volume: Collect 10-15 mL in a sterile container. Promptly neutralize with 100 mg of sodium carbonate.</p> <p>Collection Instructions: Collect early in the morning before patients eat and while they are still in bed. Perform lavage with 25 to 50 mL of chilled, sterile distilled water. Recover sample and place in a leak-proof container such as a 50-mL conical tube.</p> <p>Specimen Type: CSF</p> <p>Container/Tube: Sterile 50 mL conical tube (Polypropylene)</p> <p>Specimen Volume: Aseptically collect 10 mL or more of cerebrospinal fluid.</p> <p>Collection Instructions: Aseptically collect 10-mL of cerebrospinal fluid in a properly capped sterile container.</p>
Minimum Volume Required	<p>A. For sputum, and other respiratory specimens: 3 mL</p> <p>B. Body fluids: 2 mL</p> <p>C. Tissue: 1 gram</p> <p>D. Urine: 40 mL</p> <p>E. Gastric wash or lavage: 10 mL</p> <p>F. CSF: 2 mL</p>
Storage/Transport Conditions	Store all specimens, with the exception of CSF and tissues, at refrigerated conditions and transport on cold packs.
Transport Medium	CSF, and tissue specimens should be stored/transported at room temperature.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<ol style="list-style-type: none"> Supplies can be obtained from Public Health Laboratory's support services. Complete the test requisition form including patient information, or order request on-line through laboratory information management system. Obtain specimen, referring to directions listed above. Label specimen with a minimum of two unique patient identifiers to match requisition form. Ensure that tube is tightly capped. Place specimen and requisition form or on-line test order label inside the biohazard bag to transport to the laboratory. Ensure that the specimen is sealed inside the double bag, and form is inserted into outer pocket. Specimens should be promptly transported using courier service system. Send via regular courier service at (2-8°C) to Los Angeles County Public Health Laboratory 12750 Erickson Avenue Downey, California 90242 Phone (562) 658-1382 Fax (562) 401-5999
Test Methodology	AFB smear – fluorochrome staining
Turnaround Time	24 Hours
Interferences & Limitations	Package and Transport specimens as rapidly as possible at 2-8°C to avoid bacterial overgrowth of specimen. Samples greater than 3 days old are unreliable specimens for testing.
Additional Information	None
Reference Range	Acid-fast bacilli stain: No AFB observed.
CPT Code(s)	87206
LOINC Code	676-7



Los Angeles County Public Health Laboratories
 12750 Erickson Avenue
 Downey, CA 90242
 Phone (562) 658-1300 Fax (562) 401-5999

Acid-Fast Bacillus Smear and Culture

Other Name (s) *Mycobacterial* Culture; Concentration; Acid-Fast Bacilli Stain for pulmonary and extrapulmonary specimens

LIMS Code AFBN, AFBS

Pre-Approval Required None

Supplemental Information and Required Form(s) Los Angeles County PHL Test Request Form
<http://www.publichealth.lacounty.gov/lab/labforms.htm>

Acceptable Specimen Type(s)

Specimen Type	Container	Specimen Volume	Collection Instructions
Sputum (Expectorated)	Sputocol™ sputum collection kit (preferred)	5-10 mL	For initial diagnosis of pulmonary TB, collect three consecutive sputum specimens, before chemotherapy is begun, in 8- to 24-hours intervals, with at least one being an early morning specimen. The sample collected should be exudative material brought up from the lungs after a deep productive cough to produce a lower respiratory secretion with minimal saliva.
Sputum (Induced)	Sputocol™ sputum collection kit (preferred)	5-10 mL	Sputum induction may be considered for patients that have a difficulty producing a sputum specimen. The inhalation of warm aerosolized hypertonic (5%-10%) irritates the lungs enough to induce, both coughing and the production of a thin watery, specimen. The specimen should be a clearly labeled "Induced" on the request form or on-line since due to its watery appearance it could be mistaken for saliva.
Lower bronchoalveolar lavage, brush or wash, endotracheal aspirate, transtracheal aspirate	Sterile 50 mL conical tube Polypropylene	5-10 mL	Collect washing or aspirate in a sputum trap and place brush in a sterile properly capped leak-proof container with up to 5 mL of sterile saline.
Body fluid (abdominal, amniotic, ascites, bile, joint, paracentesis, pericardial, peritoneal, pleural, synovial, thoracentesis)	Sterile 50 mL conical tube (Polypropylene)	≥ 10 mL	Aseptically collect fluid in a sterile container. Always submit as much fluid as possible; never submit a swab dipped in fluid.
Tissue/lymph node	Sterile 50 mL conical tube Polypropylene	As much tissue as possible; Add 2 to 3 mL of sterile saline.	Aseptically collect during surgery or cutaneous biopsy procedure.
Specimen Type	Container	Specimen Volume	Collection Instructions

Urine, including collections from a catheter.	Sterile 50 mL conical tube Polypropylene	40 mL.	A first morning midstream specimen is preferred. Do not pool urine specimens or use preservatives.
Gastric wash or lavage	Sterile 50 mL conical tube Polypropylene	10-15 mL. Promptly neutralize with 100 mg of sodium carbonate	Collect early in the morning before patients eat and while they are still in bed. Perform lavage with 25 to 50 mL of chilled, sterile distilled water.
Blood	10-mL yellow-top collector tube containing sodium polyanetholsulfonate (SPS), green-top collector tube containing heparin, or ACD (yellow top).	≥ 10 mL. Minimum is 5 mL for adults; 1 mL for child.	Aseptically collect 10-mL yellow-top collector tube containing SPS, or green-top collector tube containing heparin; <u>do not collect</u> in a red-top tube, EDTA (purple top), or ACD (yellow top).
Bone marrow aspirate	10-mL yellow top collector tube containing SPS	10-mL yellow top collectors containing SPS are preferred	Prepare the puncture site as for surgical incision. Use a blood collector tube and mix contents of the tube after collection
CSF	Sterile 50 mL conical tube (Polypropylene)	≥ 10 mL	Aseptically collect cerebrospinal fluid in a properly capped sterile container
Feces (not encouraged)	Sterile 50 mL conical tube (Polypropylene)	≥ 10 mL	Do not use holding or transport medium or preservatives

Minimum Volume Required

Sources	Minimum volume
For sputum, and other respiratory specimens	3 mL
Body fluids	2 mL
Tissue	1 gram
Urine	40 mL
Gastric wash or lavage	10 mL
Blood	5 mL
CSF	2 mL
Stool	1 gram

Storage/Transport Conditions

Store and Transport at refrigerated conditions: All specimens except CSF, tissues, blood and bone marrow.

Transport Medium

Store and Transport at room temperature: CSF, tissues, blood, and bone marrow.

Specimen Labeling

Refer to Acceptable Specimen Type(s) table.

Shipping Instructions and Specimen Handling Requirements

Patient full name, DOB, MRN, date collected, time collected and specimen type, if applicable.

- Supplies can be obtained from Public Health Laboratory's support services.
- Complete the test requisition form including patient information, or order request on-line through laboratory information management system.
- Obtain specimen, referring to directions listed above.

4. Label specimen with a minimum of two unique patient identifiers to match requisition form. Ensure that tube is tightly capped.
5. Place specimen and requisition form or on-line test order label inside the biohazard bag to transport to the laboratory. Ensure that the specimen is sealed inside the double bag, and form is inserted into outer pocket.
6. Specimens should be promptly transported using courier service system.

Send via regular courier service at (2-8°C) to
 Los Angeles County Public Health Laboratory
 12750 Erickson Avenue
 Downey, California 90242
 Phone (562) 658-1382 Fax (562) 401-5999

Test Methodology Culture for the recovery of Mycobacteria and fluorochrome smear

Turnaround Time **Acid-fast bacilli stain:** 24 Hours

Culture: 64 days

Interferences & Limitations Package and Transport specimens as rapidly as possible at 2-8°C to avoid bacterial overgrowth of specimen. Samples greater than 3 days old are unreliable specimens for testing.

Additional Information None

Reference Range **Acid-fast bacilli stain:** No AFB observed.

Culture: No mycobacteria isolated.

CPT Code(s) ***Mycobacteria* Culture; Concentration; Acid-Fast Bacilli Stain**

CPT Codes: 87015, 87116, 87206

Identification CPT codes for each organism identified:

CPT code(s) 87143: *Mycobacterium spp.* by HPLC **or**

CPT code(s) 87149: *M. tuberculosis* Complex Probe **or**

CPT code(s) 87149: *M. avium* Complex Probe **or**

CPT code(s) 87149: *M. kansasii* Probe **or**

CPT code(s) 87149: *M. goodii* Probe

If TB is isolated for the first time or three months after last drug susceptibility tests were performed, a 4 drug susceptibility test panel will be performed:

CPT code(s): 87190 per drug.

LOINC Code 543-9



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Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Mycobacteria Identification

Other Name(s)	
LIMS Code	
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure isolate on appropriate slant agar with screw cap tightened and taped.
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	Lowenstein-Jensen or Middlebrook 7H10/7H11 agar
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	High Performance Liquid Chromatography (HPLC); Nucleic Acid DNA Probe
Turnaround Time	7-14 days
Interferences & Limitations	Mixed cultures (TB culture mixed with other mycobacteria or mixed with a non-acid-fast contaminant), non-viable organism, or cultures submitted on a plate are unacceptable.
Additional Information	None
Reference Range	By Report
CPT Code(s)	HPLC (87143); DNA Probe (87149)
LOINC Code	45335-7



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Mycobacterium TB complex, Susceptibility, Primary Drug Panel

Other Name(s)	TB, Tuberculosis
LIMS Code	
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure isolate on solid medium
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	<i>Mycobacterium tuberculosis</i> growth medium
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Drug tested by MGIT 960: Isoniazid 0.1 ug/mL; Rifampin 1.0 ug/mL; Ethambutol 5.0 ug/mL; and Pyrazinamide 100 ug/mL
Turnaround Time	7-14 days
Interferences & Limitations	Mixed cultures (TB culture mixed with other mycobacteria or mixed with a non-acid-fast contaminant), non-viable organism, or cultures submitted on a plate are unacceptable.
Additional Information	None
Reference Range	Susceptible
CPT Code(s)	87190 x 4
LOINC Code	29579-0



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Phone (562) 658-1300 Fax (562) 401-5999

Mycobacterium TB complex, Susceptibility, Secondary Drug Panel

Other Name(s)	TB, Tuberculosis
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm First-line drug test results should be provided
Acceptable Specimen Type(s)	Pure isolate on tubed solid medium
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	<i>Mycobacterium tuberculosis</i> growth medium
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Drug tested by liquid-based method: Capreomycin 2.5 ug/mL, Amikacin 1.0 ug/mL, Moxifloxacin 0.25, 0.5, and 1.0 ug/mL, Ethionamide 5.0 ug/mL, Rifabutin 0.5 ug/ml and Streptomycin 1.0 ug/mL Drug tested by agar proportion method: <i>p</i> -Aminosalicylic acid 2.0 ug/mL
Turnaround Time	7-14 days for liquid-based method 21-28 days for agar proportion method
Interferences & Limitations	Mixed cultures, non-viable organism, or cultures submitted on a plate are unacceptable
Additional Information	
Reference Range	Susceptible
CPT Code(s)	87190 x 6
LOINC Code	29579-0



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***Mycobacterium avium* complex, DNA Probe**

Other Name(s)	MAC
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	The DNA probe does not differentiate between members of the <i>M. avium complex</i> .
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not detected
CPT Code(s)	87149
LOINC Code	5022-9



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Downey, CA 90242
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***Mycobacterium gordonae*, DNA Probe**

Other Name(s)	None
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	None
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not detected
CPT Code(s)	87149
LOINC Code	5024-5



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Downey, CA 90242
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***Mycobacterium kansasii*, DNA Probe**

Other Name(s)	None
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	None
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not detected
CPT Code(s)	87149
LOINC Code	5026-0



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***Mycobacterium tuberculosis*, DNA Probe**

Other Name(s)	TB
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	The DNA probe does not differentiate between members of the <i>M. tuberculosis complex</i> .
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not detected
CPT Code(s)	87149
LOINC Code	17296-5



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***Mycobacterium tuberculosis* complex and Rifampin-resistance panel**

Other Name(s)	Xpert® MTB / RIF Assay; MTB complex DNA and rpoB RIF resistance mutation panel
LIMS Code	MTBNAT
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Sputum Sputocol™ sputum collection kit (recommended) or sterile 50 mL conical polypropylene tube.
Minimum Volume Required	3 mL
Storage/Transport Conditions	Store refrigerated at 2-8°C. Transport on cold pack.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Qualitative Nested RT-PCR
Turnaround Time	2 days
Interferences & Limitations	<p>The MTB/RIF assay should always be performed in conjunction with mycobacterial culture. The assay <i>does not</i> replace the need for smear with microscopy for acid-fast bacilli, culture for mycobacteria, and growth-based drug susceptibility testing, in addition to genotyping for early discovery of outbreaks.</p> <p>The performance of this test has not been evaluated for samples from patients being treated with anti-tuberculous agents. It should not be used to monitor response to therapy. Test should be requested prior to anti-TB treatment.</p> <p>A negative result does not rule out the presence of <i>Mycobacterium tuberculosis</i> complex or active disease because the organism may be present at levels below the limit of detection for this assay.</p>
Additional Information	None
Reference Range	Not Detected
CPT Code(s)	87556, 87798
LOINC Code	89371-9; 88874-3; 89372-7



Mycology



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Coccidioides immitis, DNA Probe

Other Name(s)	Valley fever, San Joaquin fever
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained , <4 weeks old.
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	None
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not Detected
CPT Code(s)	87149
LOINC Code	4994-0



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Fungal Culture Identification

Other Name(s)	Mold Identification, Yeast Identification
LIMS Code	FCI
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture isolate
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Room temperature
Transport Medium	Isolates should be on a suitable agar slant
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Ship at room temperature
Test Methodology	DNA probe, phenotypic testing
Turnaround Time	49 days
Interferences & Limitations	None
Additional Information	None
Reference Range	Per report
CPT Code(s)	87106 (yeast); 81707 (mold); Coccidioides DNA Probe (87149); Histoplasma DNA Probe (87149); Blastomyces DNA Probe (87149).
LOINC Code	580-1



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Fungal Screen, Respiratory

Other Name(s)	None
LIMS Code	SMOLD
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Sputum, bronchoalveolar lavage, bronchial washes/aspirates
Minimum Volume Required	3 mL
Storage/Transport Conditions	Refrigerated (cold packs)
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	Sputum collected early in the morning
Test Methodology	Conventional culture
Turnaround Time	4-8 Weeks
Interferences & Limitations	Saliva and 24-hour collections are unacceptable
Additional Information	If available, please provide appropriate clinical information and suspected pathogen
Reference Range	No fungal organism isolated
CPT Code(s)	87101
LOINC Code	580-1



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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Histoplasma capsulatum, DNA Probe

Other Name(s)	
LIMS Code	None
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture on an agar slant safely contained , <4 weeks old.
Minimum Volume Required	None
Storage/Transport Conditions	Room temperature
Transport Medium	Not applicable.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Do not submit plate or broth. Ship pure culture in a screw cap tube as UN2814 Category A Infectious Substance Affecting Humans
Test Methodology	Nucleic acid probe
Turnaround Time	2-7 days
Interferences & Limitations	None
Additional Information	Probe results should be interpreted in conjunction with other laboratory and clinical data.
Reference Range	Not detected
CPT Code(s)	87149
LOINC Code	5016-1



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Nocardia Identification

Other Name(s)	None
LIMS Code	NOCD
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pure culture isolate on a suitable agar slant medium.
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Keep specimen refrigerated if unable to ship immediately
Transport Medium	Suitable agar slant medium
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Biochemical and phenotypic analysis
Turnaround Time	5 Weeks
Interferences & Limitations	Mixed cultures, non-viable organism, or cultures submitted on a plate are unacceptable.
Additional Information	If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised
Reference Range	No Nocardia Isolated
CPT Code(s)	87077
LOINC Code	55096-2



Parasitology



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Coccidia, Intestinal – Modified Acid Fast Stain

Other Name(s)	Modified acid fast stain for intestinal Coccidia (<i>Isospora</i> , <i>Cryptosporidium</i> , <i>Cyclospora</i> , <i>Sarcocystic spp.</i>)
LIMS Code	PMAF
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Stool preserved in 10% formalin, sodium acetate-acetic acid-formalin (SAF) or EcoFix.
Minimum Volume Required	3 parts 10% formalin to 1-part stool
Storage/Transport Conditions	Room temperature
Transport Medium	10% formalin, sodium acetate-acetic acid-formalin (SAF) or EcoFix.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature (15-30 degrees C). Do not incubate or freeze specimen.
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	Polyvinyl alcohol-preserved stool is not recommended.
Additional Information	Three specimens are recommended for collection: one every other day or within a period of ten days.
Reference Range	None detected
CPT Code(s)	87177, 87207
LOINC Code	10656-7



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Cryptosporidium/Giardia - Stool

Other Name(s)	
LIMS Code	PDFA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Stool-preserved
Minimum Volume Required	The vial should contain 3 parts 10% formalin to 1-part stool
Storage/Transport Conditions	Room temperature
Transport Medium	10% formalin, sodium acetate-acetic acid-formalin (SAF) or EcoFix.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature (15-30 degrees C). Do not incubate or freeze specimen.
Test Methodology	Direct Immunofluorescent detection (DFA)
Turnaround Time	2-5 days
Interferences & Limitations	While the presence of Cryptosporidium or Giardia is often associated with diarrhea and vomiting, shedding of oocysts or cysts by asymptomatic individuals has been observed. In addition, the presence of oocysts or cysts in a stool specimen does not preclude the existence of other microorganisms or another underlying condition as the causative agent of a patient's symptoms. For these reasons appropriate concurrent testing for other etiologic agents should be considered.
Additional Information	Three specimens are recommended for collection: one every other day or within a period of ten days. Cryptosporidium is a significant pathogen in HIV positive patients.
Reference Range	None detected
CPT Code(s)	87272 (Cryptosporidium); 87269 (Giardia)
LOINC Code	21233-2



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Ectoparasite Identification

Other Name(s)	
LIMS Code	PMIS
Pre-Approval Required	Pre-approval from Communicable Disease Control or Lab Director as part of an investigation.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Deliver ectoparasites live if possible. Do not use preservatives. Scabies requires scrapings from burrows in skin. Skin scrapings should be sent in mineral oil in a sealed container. All samples should be fresh and submitted as soon as possible. If you are not sure of the correct way to process a sample prior to sending, then please call for guidance.
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Room temperature
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature (15-30 degrees C) Slides should be clearly labelled and sent in a non-breakable, secure container.
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	Use of preservatives or severely damaged parasites may cause the specimen to be rejected
Additional Information	Macroscopic and/or wet mount examination of arthropods of public health importance and skin for scabies.
Reference Range	None detected
CPT Code(s)	87168 (macroscopic-arthropod), 87210 (wet mount-arthropod), 87220 (skin, scabies)
LOINC Code	673-4



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Microsporidia, Modified Trichrome Stain

Other Name(s)	Microsporidia detection, direct stain
LIMS Code	PMTR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Fresh stool or stool that has been preserved in 5 or 10% formalin, sodium acetate-acetic acid-formalin (SAF). Urine or specimen other than tissue thought to contain microsporidia could be stained.
Minimum Volume Required	3 parts 10% formalin to one-part stool
Storage/Transport Conditions	Room temperature
Transport Medium	5 or 10% formalin, sodium acetate-acetic acid-formalin (SAF), or some of the newer single vial system fixatives.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature. Do not incubate or freeze specimen.
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	Lack of specificity (other organisms, including bacteria and small yeasts, often stain pink/reddish pink, as do the microsporidia spores). Polyvinyl alcohol-preserved stool is not recommended.
Additional Information	Modified trichrome on concentration sediment; includes concentration and modified trichrome stain. Microsporidia spores will not be seen on a trichrome-stained smear (modified trichrome stains are recommended).
Reference Range	None detected
CPT Code(s)	87015, 87207
LOINC Code	32701-5



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Ova and Parasite Exam for Blood

Other Name(s)	Examination of Blood, Tissue and Exudate Smears for Parasites
LIMS Code	POPB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm Confirmation of <i>Plasmodium sp.</i> require a travel history and test method of identification.
Acceptable Specimen Type(s)	<ol style="list-style-type: none"> 1. Send original slides from which the submitting laboratory made a diagnosis. (thick and thin for confirmation), 2. Send stained or unstained pretreatment slides (if unstained, fix thin smears in methanol as soon as possible after making the smear). 3. Whole blood containing EDTA (0.020 g/10 ml of blood) that was collected by venipuncture and is less than 1 h old for detection of stippling
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Place slides in protective shipping holders to prevent breakage.
Transport Medium	
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<ol style="list-style-type: none"> 1. Label all slides, blood tubes, and serum vials with the patient's name and collection date. 2. Blood tubes and serum vials must be packed in a primary shipping container with enough absorbent material to contain any leakage. 3. The primary holder of all types of specimens must be placed in a secondary protective container for shipping. 4. For whole blood specimens < 72 hours old, ship on cold packs as a "Clinical Specimen" by overnight carrier. 5. For all other specimens, ship at room temperature as a "Clinical Specimen" by overnight carrier
Test Methodology	Microscopy
Turnaround Time	1 day
Interferences & Limitations	Identification to the species level, may be impossible without the stained thin blood film and may allow the detection of the infection, with a low parasitemia. Also, <i>Trypanosoma cruzi</i> trypomastigotes are frequently distorted in thick films.
Additional Information	For a malaria diagnosis, after the first set of negative smears, samples should be taken at intervals of 8 to 12 hours for at least 3 successive days. Optimal collection time for demonstrating microfilariae is: <ul style="list-style-type: none"> • <i>Loa loa</i>—midday (10 AM to 2 PM) • <i>Brugia</i> or <i>Wuchereria</i>—at night, after 8 PM • <i>Mansonella</i>—any time • <i>Onchocerca</i>—any time
Reference Range	None detected
CPT Code(s)	87177, 87211, 87206

LOINC Code	17784-0
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Ova and Parasite Exam for Sputum

Other Name(s)	Expectorated Sputum: Direct-Mount and Stained Preparations						
LIMS Code	POPS						
Pre-Approval Required	None						
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm						
Acceptable Specimen Type(s)	<table border="0"> <tr> <td>1. Ova and larvae:</td> <td>Unpreserved</td> </tr> <tr> <td>2. Cryptosporidium parvum:</td> <td>10% Formalin</td> </tr> <tr> <td>3. Protozoa:</td> <td>PVA</td> </tr> </table> <p>Sputum should be a “deep sputum” from the lower respiratory passages.</p>	1. Ova and larvae:	Unpreserved	2. Cryptosporidium parvum:	10% Formalin	3. Protozoa:	PVA
1. Ova and larvae:	Unpreserved						
2. Cryptosporidium parvum:	10% Formalin						
3. Protozoa:	PVA						
Minimum Volume Required	Not Applicable						
Storage/Transport Conditions	Room temperature. If sputum, deliver to laboratory within 2 hours. If delay in transport, fix in 5-10% formalin or PVA.						
Transport Medium	3 parts PVA or 10% Formalin to 1-part specimen in vial. The fixative used is determined by the organism suspected.						
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.						
Shipping Instructions and Specimen Handling Requirements	Room temperature Do not incubate or freeze specimens						
Test Methodology	Microscopy						
Turnaround Time	2-5 days						
Interferences & Limitations	Expectorated sputum specimens are generally considered unacceptable for the recovery of <i>Pneumocystis carinii</i> .						
Additional Information	Parasites which can be detected and may cause pneumonia, pneumonitis, or Loeffler's syndrome include <i>Entamoeba histolytica</i> , <i>Paragonimus</i> spp., <i>Strongyloides stercoralis</i> , <i>Ascaris lumbricoides</i> , and hookworm.						
Reference Range	None detected						
CPT Code(s)	87177						
LOINC Code	673-4						



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Ova and Parasite Exam for Stool

Other Name(s)	Trichrome stain, Wet-prep concentrate
LIMS Code	SPOVA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Stool. Preferably the bloody, slimy, watery area of the stool.
Minimum Volume Required	Approximately 5 mL to "Fill to Here" line of the Para-Pak Zn-PVA transport container.
Storage/Transport Conditions	Room temperature
Transport Medium	Para-Pak Zn-PVA transport container
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature (15-30 degrees C). Do not incubate or freeze specimen
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	None
Additional Information	Use the collection spoons provided in the caps of the vials of the Para-Pak Zn-PVA Fixative.
Reference Range	None detected
CPT Code(s)	87177, 87209
LOINC Code	10704-5



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Ova and Parasite Exam for Urine

Other Name(s)	
LIMS Code	POPU
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Midday urine or a 24-h collection. Peak egg excretion occurs between noon and 3 p.m. In patients with hematuria, eggs may be found trapped in the blood and mucus in the terminal portion (last-voided portion) of the urine specimen.
Minimum Volume Required	15 mL
Storage/Transport Conditions	Room temperature.
Transport Medium	Container without preservatives.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	At room temperature (15-30 degrees C). Do not incubate or freeze specimens
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	None
Additional Information	The definitive diagnosis of urinary schistosomiasis (<i>Schistosoma haematobium</i>) is established by demonstration of <i>S. haematobium</i> eggs in urine. A concentrated wet preparation is examined. Also, <i>Trichomonas vaginalis</i> motile trophozoites may also be found in the urine, especially in infected male patients.
Reference Range	None detected
CPT Code(s)	87177
LOINC Code	673-4



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Pinworm Exam, Microscopic - Direct

Other Name(s)	<i>Enterobius vermicularis</i> eggs
LIMS Code	PPIN
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Pinworm paddle (Swube). Collected first thing in the morning.
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Room temperature
Transport Medium	Pinworm paddle (swube)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Room temperature (15-30 degrees C).
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	None
Additional Information	Screening procedure for presence of <i>Enterobius vermicularis</i> eggs. Single cellophane tape/paddle/other device examination The specimen is collected from the skin of the perianal area first thing in the morning, before the patient has bathed or used the toilet. Preparations should be taken for at least 4 to 6 consecutive days with negative results before a patient is considered free of the infection.
Reference Range	None detected
CPT Code(s)	87172
LOINC Code	675-9



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Tapeworm Proglottid Identification, Microscopic

Other Name(s)	Helminth
LIMS Code	PPRO
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Worm, tapeworm proglottid or scolex. Cover with tap water or 0.85% saline in clean, leak-proof container.
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Refrigerated at 2-8 degrees C
Transport Medium	Clean, leak-proof container.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<i>T. solium</i> eggs are infective (cysticercosis), as are the eggs of <i>Hymenolepis nana</i> . Standard safety precautions should be followed.
Test Methodology	Microscopy
Turnaround Time	2-5 days
Interferences & Limitations	Do not use formalin or alcohol as a preservative. The proglottid of <i>T. solium</i> must be gravid, containing the fully developed uterine branches. If the proglottid is not fully developed (gravid), the branches may not be visible; when the uterine branches cannot be seen and/or counted, the proglottid cannot be accurately identified to the species level.
Additional Information	Examination of portions of helminths may be recovered and seen with the naked eye. Speciation is attempted using a staining procedure of tapeworm Proglottids.
Reference Range	None detected
CPT Code(s)	87169
LOINC Code	14789-2



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Worm Identification, Macroscopic Exam of Stool

Other Name(s)	None
LIMS Code	PWOR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Fresh stool in waterproof container. Worm in a leak-proof container, covered with tap water or 0.85% saline.
Minimum Volume Required	Not Applicable.
Storage/Transport Conditions	Refrigerated at 2-8 degrees C
Transport Medium	Leak-proof container
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	<i>T. solium</i> eggs are infective (cysticercosis), as are the eggs of <i>Hymenolepis nana</i> . Standard safety precautions should be followed.
Test Methodology	Macroscopic Exam
Turnaround Time	2-5 days
Interferences & Limitations	Occasionally, other helminths may be recovered (hookworm, <i>Strongyloides stercoralis</i>), but identification requires the use of the microscope.
Additional Information	Adult helminths or portions of helminths may be recovered and seen with the naked eye. Examples include <i>E. vermicularis</i> adult worms, <i>Ascaris lumbricoides</i> adult worms, and tapeworm proglottids.
Reference Range	None detected
CPT Code(s)	87169
LOINC Code	14789-2



Serology



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Arbovirus IgG and IgM Antibody Panel, IFA (CSF)

Other Name(s)	St. Louis Encephalitis (SLE), Western Equine Encephalitis (WEE)
LIMS Code	ARBOC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	CSF
Minimum Volume Required	0.2 mL
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport on cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Submit in sterile plastic, screw-cap tube.
Test Methodology	Indirect immunofluorescent assay (IFA)
Turnaround Time	3 business days
Interferences & Limitations	False positive results may be produced if the patient has been immunized against yellow fever or if the patient has had previous infections that produce similar, cross-reacting antibodies.
Additional Information	This test is performed by non-standard methods. CSF is not an FDA cleared specimen source for this test.
Reference Range	< 1, No Antibody Detected
CPT Code(s)	86653 x 2; 86654 x 2
LOINC Code	36895-1



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Arbovirus IgG and IgM Antibody Panel, IFA (Serum)

Other Name(s)	St. Louis Encephalitis (SLE), Western Equine Encephalitis (WEE)
LIMS Code	ARBOS
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum
Minimum Volume Required	1 mL
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport on cold pack.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Submit in sterile plastic, screw-cap tube..
Test Methodology	Indirect immunofluorescent assay (IFA)
Turnaround Time	3 business days
Interferences & Limitations	Samples obtained too early during primary infection within 2 weeks after onset may not contain detectable antibodies. If Arboviral infection is suspected, a second (convalescent) sample should be obtained 10 to 21 days later and tested in parallel with the original (acute) sample. Due to serological cross-reactivity among flaviviruses, a history of previous exposure to or infection with dengue or yellow fever vaccination must be considered in interpreting serologic results.
Additional Information	All results from this and other serologies must be correlated with clinical history and other data available to the attending physician.
Reference Range	< 16, No Antibody Detected
CPT Code(s)	86653 x 2; 86654 x 2
LOINC Code	36895-1



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Dengue IgM Antibody w/ Reflex

Other Name(s)	Dengue Virus, Dengue Fever IgM Antibodies w/ reflex to PRNT Confirmation
LIMS Code	DENGMB
Pre-Approval Required	No pre-approval required. Testing performed in accordance with most recent clinical and epidemiological criteria and guidance by the CDC for Zika virus or as stand-alone. https://www.cdc.gov/dengue/healthcare-providers/testing/testing-guidance.html https://www.cdc.gov/zika/hc-providers/testing-guidance.html During the first 1-7 days of illness, a nucleic acid amplification test (NAAT) is recommended in addition to Dengue IgM test.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Blood collected in one (1) gold top serum separator tube (SST)
Minimum Volume Required	2 mL of serum
Storage/Transport Conditions	Separate serum by centrifugation as soon as possible. Refrigerate at 2-8°C within 8 hours after collection. Transport on cold packs.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	Not applicable
Test Methodology	ELISA
Turnaround Time	5 business days
Interferences & Limitations	Due to serological cross reactivity with other flaviviruses, the presence of false positive or false negative results must be considered. Assay performance with matrices other than patient sera have not been established. For patients with negative Dengue IgM results before day 8 of illness, a second sample should be obtained after day 7 of symptoms for additional serologic testing.
Additional Information	All reactive samples must be confirmed by Plaque Reduction Neutralization Test or the latest CDC guideline for diagnosis of disease. Review the latest information on testing for Zika virus disease and Dengue virus infection at the CDC website: https://www.cdc.gov/zika/hc-providers/testing-guidance.html
Reference Range	Negative
CPT Code(s)	86790
LOINC Code	29663-2



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Hepatitis A IgG Antibody

Other Name(s)	Hep A IgG Antibody
LIMS Code	HAVABG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, lipemic or contaminated specimens are unacceptable
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86708
LOINC Code	40724-7



COUNTY OF LOS ANGELES

Public Health

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Hepatitis A IgM Antibody

Other Name(s)	Hep A IgM Antibody
LIMS Code	HAVABM
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimens 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeated freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, grossly lipemic or contaminated specimens are unacceptable
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86709
LOINC Code	13950-1



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Hepatitis B Core IgM Antibody

Other Name(s)	Hep B Core IgM Antibody
LIMS Code	HBVCAM
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimens 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, grossly lipemic or contaminated specimens are unacceptable
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86705
LOINC Code	24113-3



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Hepatitis B Core Total Antibody

Other Name(s)	Hep B Core AB
LIMS Code	HBVCAB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be transported refrigerated on ice packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, lipemic or contaminated specimens are unacceptable
Additional Information	
Reference Range	Non-reactive
CPT Code(s)	86704
LOINC Code	83100-8



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Hepatitis B Surface Antibody

Other Name(s)	Hep B Surface AB
LIMS Code	HBVSAB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, grossly lipemic or contaminated specimens are unacceptable
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86706
LOINC Code	22322-2



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Hepatitis B Surface Antigen Confirmation by Neutralization

Other Name(s)	HBsAg Confirmatory
LIMS Code	HBVAGC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Neutralization
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, lipemic or contaminated specimens are unacceptable
Additional Information	The neutralization assay is used to confirm a reactive Hepatitis B surface antigen result.
Reference Range	Not confirmed
CPT Code(s)	87341
LOINC Code	65633-0



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Hepatitis B Surface Antigen with Reflex to Confirmation

Other Name(s)	Hep B Surface Ag with reflex to HBsAg confirmatory
LIMS Code	HBVSAG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be shipped on cold packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent Immunoassay (CMIA)
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, lipemic or contaminated specimens are unacceptable
Additional Information	Test performed on Abbott Architect
Reference Range	Non-reactive; Not confirmed
CPT Code(s)	87340; 87341
LOINC Code	5196-1; 65633-0



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Hepatitis C Virus Total Antibody with Reflex to HCV Qualitative NAAT

Other Name(s)	Hep C Antibody
LIMS Code	HCVABT
Pre-Approval Required	None
Supplemental Information and Required Form(s)	For non-interfaced clients use the Los Angeles County PHL Test Requisition Form http://www.publichealth.lacounty.gov/lab/labforms.htm For DHSP contracted clients use the DHSP Provider Test Request Form
Acceptable Specimen Type(s)	Serum collected in gold top serum separator tube (preferred) or red top tube Plasma collected in a lavender top K ₂ EDTA is also acceptable.
Minimum Volume Required	5-7 mL for vacutainer specimen 2-3 mL of serum or plasma
Storage/Transport Conditions	Store refrigerated at 4-8 °C. Transport on cold pack. Frozen serum or plasma should be transported on dry ice. Avoid repeat freeze/thaw cycles
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Specimen should be transported refrigerated on ice packs or dry ice if frozen.
Test Methodology	Qualitative Chemiluminescent immunoassay
Turnaround Time	3 business days
Interferences & Limitations	Grossly hemolyzed, lipemic or contaminated specimens are unacceptable
Additional Information	Specimens that are either Equivocal or Reactive for HCV total antibodies will be tested by the HCV Qualitative RNA assay to rule out active infection (CPT code 87521)
Reference Range	Non-reactive
CPT Code(s)	86803, 87521
LOINC Code	13955-0, 11259-9



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Herpes Simplex Virus Type 2 IgG Antibody

Other Name(s)	LIAISON® HSV-2 IgG assay
LIMS Code	HSV2G
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	1 mL serum
Storage/Transport Conditions	Store refrigerated at 2-8°C. Ship on cold pack.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	8 business days
Interferences & Limitations	The performance of this assay has not been established for monitoring of HSV-2 therapy
Additional Information	None
Reference Range	Negative (> 0.90 Index)
CPT Code(s)	86696
LOINC Code	43180-9



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HIV-1 IgG Antibody Confirmation, Western Blot

Other Name(s)	Human Immunodeficiency virus type 1
LIMS Code	HIVBW
Pre-Approval Required	Consult with serology unit for availability
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Serum or plasma
Minimum Volume Required	1 mL serum or plasma (minimum 0.25mL)
Storage/Transport Conditions	Serum may be stored at 2-8 °C for up to seven days. Transport on cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Send specimen by courier on cold pack or ship by mail as UN 3373 Biological substance, Category B
Test Methodology	Western blot
Turnaround Time	3 business days
Interferences & Limitations	Avoid freeze/thaw cycles. Grossly hemolyzed or lipemic specimens are unacceptable.
Additional Information	This assay is intended only when a specimen is repeatedly reactive in a screening assay for HIV 1 or HIV 1-2 antibodies
Reference Range	Negative
CPT Code(s)	86689
LOINC Code	5221-7



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HIV-1/2 Antibody Differentiation Assay

Other Name(s)	Biorad Genius Supplemental Test
LIMS Code	HIVSA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum (Serum Separator Preferred) Plasma (K ₂ EDTA plastic)
Minimum Volume Required	2 ml Serum or Plasma (minimum 2 ml)
Storage/Transport Conditions	Specimens may be shipped at ambient temperature, at 2-8°C (wet ice), or frozen (dry ice) once centrifuged and removed from clot.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, medical record number, date collected, and specimen source.
Shipping Instructions and Specimen Handling Requirements	Patient full name, DOB, medical record number, date collected, and specimen source. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Test Methodology	ImmunoConcentration™
Turnaround Time	3 days
Interferences & Limitations	A nonreactive result for an individual subject indicates absence of detectable HIV antibodies. However, a nonreactive test result does not preclude the possibility of exposure to or infection with HIV-1 and/or HIV-2. A person who has antibodies to HIV-1 is presumed to be infected with the virus, except a person who has participated in an HIV vaccine study may develop antibodies to the vaccine and may or may not be infected with HIV. Clinical correlation is indicated with appropriate counseling, medical evaluation, and possibly additional testing to decide whether a diagnosis of HIV infection is accurate.
Additional Information	None
Reference Range	Negative
CPT Code(s)	86701, 86702
LOINC Code	68961-2, 81641-3



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HIV-1/2 Antibody Differentiation Assay w/reflex to HIV-1 Qual. NAAT

Other Name(s)	
LIMS Code	HIVASA
Pre-Approval Required	Test requisition forms must be submitted and screened prior to testing.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Serum Separator Preferred, Plasma: K ₂ EDTA plastic, or green screw cap tubes
Minimum Volume Required	Serum: 2mL, Plasma: 2mL
Storage/Transport Conditions	Store serum or plasma refrigerated (2–8 °C) up to 5 days, or freeze < -20°C Ship serum or plasma on cold packs or frozen on dry ice
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Immunochromatographic Lateral Flow
Turnaround Time	2 business days.
Interferences & Limitations	A nonreactive result for an individual subject indicates absence of detectable HIV antibodies. However, a nonreactive test result does not preclude the possibility of exposure to or infection with HIV-1 and/or HIV-2. Negative, indeterminate, or invalid results will be reflex tested in HIV-1 qualitative RNA NAAT to rule-out acute HIV-1 infection when circulating HIV-1 antigen and antibodies are not detectable. A person who has antibodies to HIV-1 is presumed to be infected with the virus, except a person who has participated in an HIV vaccine study may develop antibodies to the vaccine and may or may not be infected with HIV. Clinical correlation is indicated with appropriate counseling, medical evaluation, and possibly additional testing to decide whether a diagnosis of HIV infection is accurate.
Additional Information	None
Reference Range	Negative
CPT Code(s)	86701, 86702
LOINC Code	68961-2 (HIV-1); 81641-3 (HIV-2); 25835-0 (NAT)



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HIV Antigen/Antibody Screening Assay with reflex

Other Name(s)	HIV Antigen/Antibody Multitest Algorithm (4 th generation screen)
LIMS Code	HIVAGB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Serum: Serum Separator Preferred, Plasma: K ₂ EDTA plastic, or green screw cap tubes
Minimum Volume Required	Serum: 2mL, Plasma: 2mL
Storage/Transport Conditions	Store serum or plasma refrigerated (2–8 °C) up to 5 days, or freeze < -20°C Ship serum or plasma on cold packs or frozen on dry ice
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable.
Shipping Instructions and Specimen Handling Requirements	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Test Methodology	Chemiluminescent Microparticle Immunoassay (CMIA)
Turnaround Time	2 business days.
Interferences & Limitations	A nonreactive result for an individual subject indicates absence of detectable HIV antibodies. However, a nonreactive test result does not preclude the possibility of exposure to or infection with HIV-1 and/or HIV-2. Repeatedly reactive specimens will be reflexed to supplemental testing by the HIV-1/ HIV-2 antibody differentiation assay (HIVASA) and as needed the HIV-1 Qualitative RNA Nucleic Acid Amplification Test (HIVNAA) to rule -out Acute HIV-1 infection. Both the HIVASA (CPT 86701 and 86702) and HIVNAA (CPT87636) assays will be performed at an additional charge. A person who has antibodies to HIV-1 is presumed to be infected with the virus, except a person who has participated in an HIV vaccine study may develop antibodies to the vaccine and may or may not be infected with HIV. Clinical correlation is indicated with appropriate counseling, medical evaluation, and possibly additional testing to decide whether a diagnosis of HIV infection is accurate.
Additional Information	The HIV Ag/Ab Combo Assay is intended for use as part of a Multi-test algorithm to aid in the diagnosis of HIV-1/HIV-2 infection, including acute or primary HIV-1 infection. The assay does not distinguish between the detection of HIV p24 antigen, HIV-1 antibody, or HIV-2 antibody.
Reference Range	Non-reactive
CPT Code(s)	87389
LOINC Code	56888-1



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Measles IgG Antibody

Other Name(s)	Rubeola, LIAISON® Measles IgG assay
LIMS Code	MEAG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	1 mL serum
Storage/Transport Conditions	Store and ship refrigerated
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	2 business days
Interferences & Limitations	False negative results may occur if samples are collected early in the disease. Specimens from patients receiving preparations of mouse monoclonal antibodies for therapy or diagnosis may have interference with this assay and their results should be evaluated with care. Grossly hemolyzed, lipemic or contaminated samples are unacceptable.
Additional Information	Immunity screen requires IgG determination only.
Reference Range	Vaccinated: Positive (≥ 16.5 AU/mL), Unvaccinated: Negative (< 13.5 AU/mL)
CPT Code(s)	86765
LOINC Code	35275-7



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Measles IgG and IgM Panel, IFA

Other Name(s)	Rubeola
LIMS Code	MEGIS, MEMIS
Pre-Approval Required	<p>Consultation and approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for diagnostic measles laboratory testing.</p> <p>Immunity screen requires IgG determination only.</p> <p>To report suspect measles, the Vaccine Preventable Disease Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-351-7800. Ask to speak to the Epidemiologist on duty.</p> <p>During non-business hours (before 7:30 am, after 5:00 pm, or weekends) call 213-974-1234 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Acceptable Specimen Type(s)	<p>Serum: Collect in red top or gold top serum separator tube (SST). Separate serum by centrifugation if possible. Aseptically transfer serum to a screw cap, sterile, leak proof container.</p> <p>For Infants: Capillary tubes may be used. Collect 3 tubes to assure adequate specimen volume.</p> <p>See special instructions from CDPH-VRDL located at: http://www.cdph.ca.gov/HealthInfo/discond/Documents/CDPHMeaslesLABTesting2011-01.pdf</p> <p>To confirm acute infection, paired samples are required. The first sample (acute) should be taken as soon as possible after the clinical signs of infection. The second (convalescent) sample should be taken within 10-14 days of the first.</p>
Minimum Volume Required	2 mL serum
Storage/Transport Conditions	<p>Blood specimens should be stored at 4-8 °C. If testing is to be delayed longer than 5 days, the samples should be frozen at -20°C or colder.</p> <p>Specimens should be submitted in a biohazard specimen bag with absorbent material. Transport specimens in an insulated container on cold pack. Capillary tubes should be capped and placed in another larger tube for protection before transport.</p>
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, and specimen type, if applicable.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Indirect fluorescent antibody (IFA) test
Turnaround Time	1-3 business days after specimen receipt at the Public Health Laboratory
Interferences & Limitations	Lack of significant rise in antibody titer does not exclude the possibility of measles infection. When measuring IgG antibody levels, positive results in neonates must be interpreted with caution since maternal antibody is transferred passively from the mother to the fetus before

	<p>birth. IgM assays are generally more useful indicators of infection children below the age of six months.</p> <p>Results of this test should be interpreted in the light of other clinical findings and diagnostic procedures.</p>
Additional Information	<p>Providers are encouraged to collect acute serum specimens in conjunction with respiratory and urine specimens when possible to assist with the diagnosis of measles.</p> <p>In recently vaccinated persons (6-45 days prior to rash onset), neither IgM nor IgG responses can distinguish measles disease from a vaccination response. A separate specimen (urine, NP, or throat) must be submitted for Measles PCR and genotyping to distinguish between vaccine and wild-type strains.</p>
Reference Range	IgG <8, No Antibody Detected; IgM <10, No Antibody Detected
CPT Code(s)	86765 x 2
LOINC Code	21501-2; 5245-6



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Measles IgG Antibody, IFA

Other Name(s)	Rubeola
LIMS Code	MEGIS
Pre-Approval Required	<p>Consultation and approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for diagnostic measles laboratory testing.</p> <p>Immunity screen requires IgG determination only.</p> <p>To report suspect measles, the Vaccine Preventable Disease Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-351-7800. Ask to speak to the Epidemiologist on duty.</p> <p>During non-business hours (before 7:30 am, after 5:00 pm, or weekends) call 213-974-1234 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Required Specimen Type(s)	<p>Serum: Collect in red top or gold top serum separator tube (SST). Separate serum by centrifugation if possible. Aseptically transfer serum to a screw cap, sterile, leak proof container.</p> <p>For Infants: capillary tubes may be used for specimen collection. See special instructions from CDPH-VRDL located at: http://www.cdph.ca.gov/HealthInfo/discond/Documents/CDPHMeaslesLabTesting2011-01.pdf</p> <p>To confirm acute infection, paired samples are required. The first sample (acute) should be taken as soon as possible after the clinical signs of infection. The second (convalescent) sample should be taken within 10-14 days of the first.</p>
Minimum Volume Required	1 mL serum (minimum 0.25 mL)
Storage/Transport Conditions	<p>Blood specimens should be stored at 4-8 °C. If testing is to be delayed longer than 5 days, the samples should be frozen at -20°C or colder.</p> <p>Specimens should be submitted in a biohazard specimen bag with absorbent material. Transport specimens in an insulated container on cold pack.</p>
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, specimen type.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Indirect fluorescent antibody (IFA) test
Turnaround Time	2 business days
Interferences & Limitations	<p>Lack of significant rise in antibody titer does not exclude the possibility of measles infection.</p> <p>When measuring IgG antibody levels, positive results in neonates must be interpreted with caution since maternal antibody is transferred passively from the mother to the fetus before birth. IgM assays are generally more useful indicators of infection children below the age of six months.</p>

	Results of this test should be interpreted in the light of other clinical findings and diagnostic procedures.
Additional Information	For the detection of IgG antibodies
Reference Range	< 8, No Antibody Detected
CPT Code(s)	86765
LOINC Code	21501-2



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Measles IgM Antibody, IFA

Other Name(s)	Rubeola
LIMS Code	MEMIS
Pre-Approval Required	<p>Consultation and approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for diagnostic measles laboratory testing.</p> <p>Immunity screen requires IgG determination only.</p> <p>To report suspect measles, the Vaccine Preventable Disease Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-351-7800. Ask to speak to the Epidemiologist on duty.</p> <p>During non-business hours (before 7:30 am, after 5:00 pm, or weekends) call 213-974-1234 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Required Specimen Type(s)	<p>Serum: Collect in red top or gold top serum separator tube (SST). Separate serum by centrifugation if possible. Aseptically transfer serum to a screw cap, sterile, leak proof container.</p> <p>For Infants: Capillary tubes may be used for specimen collection. Collect 3 tubes to assure adequate specimen volume.</p> <p>See special instructions from CDPH-VRDL located at: http://www.cdph.ca.gov/HealthInfo/discond/Documents/CDPHMeaslesLabTesting2011-01.pdf</p> <p>To confirm acute infection, paired samples are required. The first sample (acute) should be taken as soon as possible after the clinical signs of infection. The second (convalescent) sample should be taken within 10-14 days of the first.</p>
Minimum Volume Required	1 mL serum (minimum 0.25 mL)
Storage/Transport Conditions	Blood specimens should be stored at 4-8 °C. If testing is to be delayed longer than 5 days, the specimens should be frozen at -20°C or colder. Specimens should be submitted in a biohazard specimen bag with absorbent material. Transport specimens in an insulated container on cold pack. Capillary tubes should be capped and placed in another larger tube for protection before transport.
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, specimen type.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call 213-974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Indirect fluorescent antibody (IFA) test
Turnaround Time	2 business days
Interferences & Limitations	Lack of significant rise in antibody titer does not exclude the possibility of measles infection.

	<p>When measuring IgG antibody levels, positive results in neonates must be interpreted with caution since maternal antibody is transferred passively from the mother to the fetus before birth. IgM assays are generally more useful indicators of infection children below the age of six months.</p> <p>Results of this test should be interpreted in the light of other clinical findings and diagnostic procedures.</p>
Additional Information	For the detection of IgM antibodies
Reference Range	< 10, No Antibody Detected
CPT Code(s)	86765
LOINC Code	5245-6



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Mumps IgG Antibody

Other Name(s)	LIAISON® Mumps IgG assay
LIMS Code	MUMG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	1 mL serum
Storage/Transport Conditions	Store and ship refrigerated
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	2 business days
Interferences & Limitations	Specimens from patients receiving preparations of mouse monoclonal antibodies for therapy or diagnosis may have interference with this assay and their results should be evaluated with care. Grossly hemolyzed, lipemic or contaminated samples will not be tested.
Additional Information	Immunity screen requires IgG determination only.
Reference Range	Vaccinated: Positive (≥ 11.0 AU/mL), Unvaccinated: Negative (< 9.0 AU/mL).
CPT Code(s)	86735
LOINC Code	6476-6



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Rickettsia IgG & IgM Antibody, Spotted/Typhus Fever Grp, IFA (CSF)

Other Name(s)	Rocky Mountain Spotted Fever (<i>Rickettsia rickettsii</i>); Murine typhus (<i>Rickettsia typhi</i>); Louse-borne typhus (<i>R. prowazekii</i>)
LIMS Code	RICC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	CSF
Minimum Volume Required	0.25 mL CSF
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport on cold pack.
Transport Medium	Sterile, screw cap tube
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Indirect immunofluorescent assay (IFA)
Turnaround Time	2 business days
Interferences & Limitations	Cross-reactivity within the Spotted Fever group or the Typhus Fever group precludes the speciation of the infecting Rickettsia by this procedure.
Additional Information	This test is performed by non-standard methods. CSF is not an FDA cleared specimen source for this test.
Reference Range	CSF < 1, No Antibody Detected
CPT Code(s)	86757 x 4
LOINC Code	35740-0



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Rickettsia IgG & IgM Antibody, Spotted/Typhus Fever Grp, IFA(Serum)

Other Name(s)	Rocky Mountain Spotted Fever (<i>Rickettsia rickettsii</i>); Murine typhus (<i>R. typhi</i>); Louse-borne typhus (<i>R. prowazekii</i>)
LIMS Code	RIC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum
Minimum Volume Required	1 mL (minimum 0.25 mL)
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport on cold packs. If submission is to be delayed longer than 5 days, store at -20°C or colder and transport on dry ice.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Indirect immunofluorescent assay (IFA)
Turnaround Time	2 business days
Interferences & Limitations	Cross-reactivity within the Spotted Fever group or the Typhus Fever group precludes the speciation of the infecting Rickettsia by this procedure. Antibody is variably absent for 1 to 2 weeks after onset of symptoms and an initial negative titer should not be used to exclude the diagnosis of Rickettsial disease. A second (convalescent) serum specimen should be obtained 1 to 2 weeks later to establish the diagnosis in such patients.
Additional Information	The assay is for the detection and semi-quantitation of antibodies to Spotted Fever and Typhus Fever group Rickettsia.
Reference Range	Serum < 64, No Antibody Detected
CPT Code(s)	86757 x 4
LOINC Code	35740-0



Los Angeles County Public Health Laboratories

12750 Erickson Avenue
Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Rubella IgG Antibody

Other Name(s)	German measles, LIAISON® Rubella IgG assay
LIMS Code	RUBG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	Whole blood: 2mL, Serum: 1mL
Storage/Transport Conditions	Store refrigerated at 2-8°C. Ship on cold pack within three days of collection.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	2 business days.
Interferences & Limitations	Cross reactivity with HBsAg, measles IgG, mumps IgG, anti-HCV, anti-HIV1/2, parvovirus IgG, gamma globulin, rheumatoid factor, and <i>Treponema pallidum</i> has not been determined by this assay. The performance characteristics of human anti-mouse antibodies and other heterophile antibodies has not been established and results should be carefully evaluated. Grossly hemolyzed, lipemic or contaminated samples are unacceptable and will not be tested.
Additional Information	Immunity screen requires IgG determination only.
Reference Range	Vaccinated: Positive (≥ 1.0 Index), Unvaccinated: Negative (< 0.9 Index).
CPT Code(s)	86762
LOINC Code	40667-8



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Rubella IgM Antibody, EIA

Other Name(s)	German measles,
LIMS Code	RUBME
Pre-Approval Required	<p>Consultation and approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for diagnostic rubella lab testing.</p> <p>Immunity screen requires IgG determination only.</p> <p>To report suspect rubella, the Vaccine Preventable Disease Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-351-7800. Ask to speak to the Epidemiologist on duty.</p> <p>During non-business hours (before 7:30 am, after 5:00 pm, or weekends) call 213-974-1234 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Acceptable Specimen Type(s)	Serum
Minimum Volume Required	1 mL (minimum 0.30 mL)
Storage/Transport Conditions	Store refrigerated at 2 to 8° C. Transport on cold packs.
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, and specimen type, if applicable.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	EIA
Turnaround Time	2 business days
Interferences & Limitations	<p>Rheumatoid factor, if present along with specific IgG, will cause false positive results.</p> <p>False positive or negative results may occur in patients infected with Epstein-Barr virus, and sera from patients with infectious mononucleosis.</p> <p>The Rubella IgM ELISA has not been validated using neonatal samples.</p>
Additional Information	To confirm acute infection, paired samples are required. The first sample (acute) should be taken as soon as possible after the clinical signs of infection. The second (convalescent) sample should be taken within 10-14 days of the first.
Reference Range	≤ 0.90, No Antibody Detected
CPT Code(s)	86762
LOINC Code	5335-5



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

SARS-CoV-2 IgG, Qualitative with Reflex

Other Name(s)	2019 Novel Coronavirus Antibody, COVID-19 Antibody
LIMS Code	COV2GA, COV2GD
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Blood collected in one (1) gold top serum separator tube (SST)
Minimum Volume Required	2 mL of serum or plasma
Storage/Transport Conditions	Separate serum by centrifugation as soon as possible. Refrigerate at 2-8°C and transport on cold packs.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact PHL at (562) 658-1460 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Chemiluminescent Microparticle Immunoassay Assay (CMIA), Chemiluminescent Immunoassay (CLIA)
Turnaround Time	2 business days
Interferences & Limitations	<p>Negative results for IgG antibodies do not preclude SARS-CoV-2 infection. SARS-CoV-2 serology should not be used as the sole basis to diagnose or exclude infection, to screen for asymptomatic infections, for determination of protective antibodies, returning to congregate settings, or decisions about employment. SARS-CoV-2 serology is best used when paired with molecular testing. Results obtained with SARS-CoV-2 serology should be interpreted in conjunction with patient history, clinical findings, and the results from other laboratory tests and evaluations</p> <p>Negative results indicate a person has not been exposed to SARS-CoV-2, or that the person has been exposed very recently without antibody production. False negative results can occur if SARS-CoV-2 antibodies are not present at a level that is detectable by the assay, the virus has undergone amino acid mutation leading to epitope changes recognized by antibodies in the test, or timing of specimen collection versus antibody production.</p> <p>False positive results for IgG antibodies may occur due to cross-reactivity from pre-existing antibodies, other coronaviruses, or other possible causes</p>
Additional Information	Letters of Authorization, along with the authorized Fact Sheets for Health Care Providers, the authorized Fact Sheets for Patients, and authorized labeling for the Abbott Architect SARS-CoV-2 IgG Assay and the LIAISON SARS-CoV-2 S1/S2 IgG Assay are available on the FDA website: https://www.fda.gov/medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices/vitro-diagnostics-euas
Reference Range	Negative
CPT Code(s)	86769
LOINC Code	94563-4



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

SARS-CoV-2 IgM/IgG, Qualitative

Other Name(s)	2019 Novel Coronavirus Antibody, COVID-19 Antibody
LIMS Code	COV2MG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Blood collected in one (1) gold top serum separator tube (SST)
Minimum Volume Required	2 mL of serum or plasma
Storage/Transport Conditions	Separate serum by centrifugation as soon as possible. Refrigerate at 2-8°C and transport on cold packs.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	In Los Angeles County, contact PHL at (562) 658-1460 during business hours for specimen notification, sample pick up, and assistance with packing specimens. After hours, weekends, or holidays contact the County Operator and ask for the public health laboratory director at 213-974-1234.
Test Methodology	Lateral Flow Immunoassay
Turnaround Time	2 business days
Interferences & Limitations	<p>Negative results do not preclude SARS-CoV-2 infection and should not be used as the sole basis for patient management decisions. IgM and IgG antibodies against SARS-CoV-2 arise nearly simultaneously in serum within 2 to 3 weeks after illness onset. However, antibodies may not be detected in the first few days of infection; the sensitivity of serological testing early after COVID-19 infection is unknown.</p> <p>SARS-CoV-2 serological tests should NOT be used for the following: to screen for asymptomatic shedders, to determine if an individual is protected against future COVID-19 infections, to guide personal protective equipment (PPE) use or infection control measures, to determine return to congregant settings, or to make decisions about employment (return-to-work, hiring, duty assignment, etc.)</p> <p>False positive results for IgM and IgG antibodies may occur due to cross-reactivity from pre-existing antibodies or other possible causes.</p>
Additional Information	Letters of Authorization, along with the authorized Fact Sheets for Health Care Providers, the authorized Fact Sheets for Patients, and authorized labeling for the Cellex qSARS-CoV-2 IgG/IgM Rapid Test are available on the FDA website: https://www.fda.gov/medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices/vitro-diagnostics-euas
Reference Range	Negative
CPT Code(s)	86328
LOINC Code	94507-1, 94508-9



Los Angeles County Public Health Laboratories

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Syphilis Confirmation, FTA-ABS

Other Name(s)	Fluorescent Treponemal Antibody Absorption (FTA-ABS) Test
LIMS Code	FTAS
Pre-Approval Required	Consultation and approval is required by the Los Angeles County Department of Public Health STD Program for diagnostic syphilis laboratory using FTA-ABS Test. STD Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-744-3070. Notify the Public Health Laboratory – Serology Unit for FTA-ABS test request at 562-685-1300 weekdays 8:00 am – 5:00 pm.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Gold top SST tube or red top tube
Minimum Volume Required	1 mL serum (minimum 0.25 mL)
Storage/Transport Conditions	Store refrigerated at 2-8°C. Transport on cold packs. If testing is to be delayed, store serum samples at -20°C.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Immunofluorescent assay (IFA)
Turnaround Time	3 business days
Interferences & Limitations	The FTA-ABS test is not useful in measuring the effectiveness of therapy. Biological false positive may occur at a low frequency.
Additional Information	Grossly hemolyzed or lipemic samples are unacceptable
Reference Range	Non-reactive
CPT Code(s)	86780
LOINC Code	5393-4



Los Angeles County Public Health Laboratories

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Downey, CA 90242
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Syphilis Confirmation, TPPA

Other Name(s)	<i>Treponemal pallidum</i> –Particle Agglutination (TPPA),
LIMS Code	TPPAS
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Gold top SST or red top Plasma: Lavender or purple top EDTA vacutainer tube
Minimum Volume Required	1 mL serum or plasma
Storage/Transport Conditions	Store refrigerated at 2-8°C, if transporting is to be delayed more than 4 hours. Store separated serum at -20°C if testing is to be delayed. For plasma, the maximum storage time is 48 hours at 2-8°C. Do not freeze plasma. Transport samples in an insulated container with cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	None
Test Methodology	Passive agglutination
Turnaround Time	3 business days
Interferences & Limitations	Treponemal test results may remain positive for life and cannot be used to evaluate response to treatment or confirm reinfection. The TPPA may be reactive in a small percentage (less than 1%) of normal or healthy persons; these false-positive results are often transient, their case unknow Samples from patients with HIV, Leprosy, Toxoplasmosis, H. pyloric, and drug addiction may react, on occasion, causing false-positive or inconclusive results.
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86780
LOINC Code	24312-1



Los Angeles County Public Health Laboratories

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Syphilis RPR Reflex Panel

Other Name(s)	Rapid Plasma Reagin (RPR) with Reflex to Titer and TPPA Confirmation
LIMS Code	RPRB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Gold top SST or red top Plasma: Lavender or purple top EDTA vacutainer tube
Minimum Volume Required	1 mL serum or plasma
Storage/Transport Conditions	Store refrigerated at 2-8°C, if transporting is to be delayed more than 4 hours. Store separated serum at -20°C if testing is to be delayed. For plasma, the maximum storage time is 48 hours at 2-8°C. Do not freeze plasma. Transport samples in an insulated container with cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460.
Test Methodology	Semi-Quantitative Charcoal Agglutination/Semi-Quantitative Particle Agglutination
Turnaround Time	2-5 days
Interferences & Limitations	With cardiolipin type antigens, biological false positive reactions have been reported in diseases such as infectious mononucleosis, leprosy, malaria, lupus erythematosus, vaccinia, and viral pneumonia. Pregnancy, narcotic addiction, recent immunization, and autoimmune diseases may also give false positive reactions. Lipemic or grossly hemolyzed sera will not be tested due to the possibility of non-specific reactions.
Additional Information	Non-treponemal titers of treated patients or those who have been re-infected, do not decrease rapidly compared to patients treated in early infection. Some individuals may become sero-fast and retain non-treponemal reactivity for life.
Reference Range	Nonreactive
CPT Code(s)	86592; 86593; 86780
LOINC Code	20507-0



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Syphilis Screen, RPR Quantitative

Other Name(s)	Rapid Plasma Reagin (RPR) card test, Reagin antibody (titer) by RPR
LIMS Code	SSRPRQ
Pre-Approval Required	None, use for patients with past history and documented treatment
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Gold top SST or red top Plasma: Lavender or purple top EDTA vacutainer tube
Minimum Volume Required	1 mL serum or plasma
Storage/Transport Conditions	Store refrigerated at 2-8°C, if transporting is to be delayed more than 4 hours. If testing is to be delayed, store separated serum samples at -20°C. For plasma, the maximum storage time is 48 hours at 2-8°C. Do not freeze plasma. Transport samples in an insulated container with cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, specimen type. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460.
Test Methodology	Semi-Quantitative Charcoal Agglutination
Turnaround Time	3 business days
Interferences & Limitations	With cardiolipin type antigens, biological false positive reactions have been reported in diseases such as infectious mononucleosis, leprosy, malaria, lupus erythematosus, vaccinia, and viral pneumonia. Pregnancy, narcotic addiction, recent immunization, and autoimmune diseases may also give false positive reactions. Lipemic or grossly hemolyzed sera are not acceptable. Non-treponemal titers of treated patients or those who have been re-infected, do not decrease rapidly compared to patients treated in early infection. Some individuals may become sero-fast and retain non-treponemal reactivity for life.
Additional Information	This test is used to quantitate levels of non-treponemal (reagin) antibodies to monitor efficacy of syphilis treatment.
Reference Range	Non-reactive
CPT Code(s)	86593
LOINC Code	31147-2



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

TB QuantiFERON® Gold Plus

Other Name(s)	Interferon-gamma Release Assay (IGRA) for <i>Mycobacterium tuberculosis</i> QFT-Plus, QuantiFERON® TB Gold Plus
LIMS Code	QFTP
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	<p>Whole blood</p> <p>COLLECTION</p> <p>Collection of whole blood MUST BE performed using the QuantiFERON® TB Gold Plus Collection Kit which contains the instructions for the collection and handling of (one each): (1) gray-top (with white ring), uncoated (nil); (2) green cap with white ring, TB1tube: (3) yellow cap with white ring, TB2 tube; (4) purple top with white ring, mitogen-coated.</p> <p>Collect 1 ml blood by venipuncture into each of the 4 tubes.</p> <ul style="list-style-type: none"> The 4 tubes MUST be drawn in the following order: GRAY top; 2) GREEN top; 3) YELLOW top; 4) PURPLE top. Tubes fill slowly by vacuum. Blood MUST meet the BLACK INDICATOR LINE, on the label. If the level of blood is not close to the black indicator line, another blood specimen must be collected. If butterfly needle is used, first collect other required tubes or use a “purge” (throw away) tube to remove the air. Then proceed with collecting the QFT tubes. <p>If other blood work is also required, collect the QFT tubes LAST. Immediately after filling tubes, SHAKE (10 times) all 4 tubes just firmly enough to ensure the entire inner surface of the tube is coated with blood, to dissolve antigens on tube walls.</p>
Minimum Volume Required	<p>1 mL x 4 tubes in QuantiFERON®-TB Gold Plus kit</p> <p>QFT blood collection tubes are manufactured to draw 1mL ± 10% and perform optimally within the range of 0.8 mL to 1.2 mL.</p> <p>Under or over-filling of the tubes outside of the 0.8 mL to 1.2 mL range will be rejected since it may lead to erroneous results. Specimens will not be tested.</p>
Storage/Transport Conditions Transport Medium	<p>INCUBATION</p> <ul style="list-style-type: none"> Keep all tubes at room temperature until incubation. RE-MIX all tubes by inverting 10 times immediately prior to incubation (Hemolyzed plasma is acceptable). Incubate all tubes UPRIGHT (vertical) at 37°C for 16-24 hours. Place rack of tubes in incubator at end of shift and record date, incubator temperature and time on QFT specimen tracking log. Improper incubation times or temperature will result in specimens being rejected since these factors may cause erroneous results. Specimens will not be tested. <p>TRANSPORT</p> <ul style="list-style-type: none"> Take specimens from incubator and record the date, incubator temperature and time on QFT specimen tracking log sheet. Specimens will be rejected without the QFT specimen tracking log. Specimens will not be tested. Transport all QFT specimens at room temperature with log sheet stapled to paper bag.

	<ul style="list-style-type: none"> • Packaged specimens labeled “TO PHL” should be ready for pick up by the PHL courier to avoid specimen processing delays. <p>HOLIDAY/WEEKEND SCHEDULING</p> <p>Do not collect on Friday or any day prior to a County holiday.</p>
Specimen Labeling	<p>Patient full name, DOB, MRN, date and time collected.</p> <p>Sunquest users: The large barcoded label MUST be placed as shown just below the colored “QuantiFERON” top, so back window is visible on all 4-collection tubes. Prior to incubation, return all 4 tubes to the biohazard bag provided.</p> <p>MAKE SURE BACK WINDOW IS VISIBLE ON ALL 4-COLLECTION TUBES.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460.
Test Methodology	Whole blood interferon-gamma detection and quantification by ELISA in response to CD4+ and CD8+ T cell antigens
Turnaround Time	4 business days
Interferences & Limitations	<p>Results from QuantiFERON® - TB Gold Plus test must be used in conjunction with individual’s epidemiological history, current medical status, and results of other diagnostic evaluations.</p> <p>Individuals with Nil values greater than 8I U/mL are classed as “Indeterminate” because a 25% higher response to TB Antigens may be outside the assay measurement range.</p> <p>A diagnosis of LTBI requires that tuberculosis disease must be excluded by medical evaluation including an assessment of current medical and diagnostic tests for disease as indicated.</p> <p>A negative result must be considered with the individual’s medical and historical data relevant to probability of M. tuberculosis infection and potential risk of progression to tuberculosis disease, particularly for individuals with impaired immune function. Negative predictive values are likely to be low for persons suspected to have <i>M. tuberculosis</i> disease and should not be relied on to exclude disease.</p> <p>Unreliable or indeterminate results may occur due to the following:</p> <ul style="list-style-type: none"> • Deviations from the procedure described in the Package Insert • Incorrect transport / handling of blood specimens • Excessive levels of circulating IFN-γ or presence of heterophile antibodies • Longer than 16 hours from blood specimen drawing to incubation at 37°± 1°C
Additional Information	QuantiFERON detects latent infection with Mycobacterium tuberculosis. Test interpretation is qualitative (Positive, Negative, or Indeterminate) and numerical values are shown for informational purposes only.
Reference Range	Negative
CPT Code(s)	86480
LOINC Code	71775-1



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Syphilis *Treponema pallidum* IgG and IgM Antibodies

Other Name(s)	Architect Syphilis TP assay
LIMS Code	TRPSTA
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Serum: Gold top SST (preferred) or red top tube Plasma: EDTA purple or lavender top tube
Minimum Volume Required	1 mL serum or plasma
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport in insulated container with cold packs.
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Chemiluminescent microparticle immunoassay (CMIA)
Turnaround Time	5 business days
Interferences & Limitations	Grossly hemolyzed and contaminated specimens are unacceptable.
Additional Information	None
Reference Range	Non-reactive
CPT Code(s)	86780
LOINC Code	47236-5



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Treponemal IgG and IgM Antibodies w/Reflex to Quantitative RPR

Other Name(s)	LIAISON® Treponema assay, Syphilis reverse algorithm screen with reflex
LIMS Code	TPRAB
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	Whole blood: 2mL, Serum: 1mL
Storage/Transport Conditions	Store and ship refrigerated
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	3 business days
Interferences & Limitations	Assay cannot distinguish different antibody classes and cannot discriminate between active and treated cases. Positive results may score negative on non-treponemal tests (VDRL, RPR). Results should be interpreted with caution in immunocompromised individuals since antibody levels may be affected by existing conditions.
Additional Information	None
Reference Range	Negative (<i>Treponema pallidum</i> antibodies not detected)
CPT Code(s)	86780
LOINC Code	47236-5



Los Angeles County Public Health Laboratories

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Downey, CA 90242
Phone (562) 658-1300 Fax (562) 401-5999

Varicella zoster virus IgG Antibody, IFA

Other Name(s)	Chicken pox
LIMS Code	VZGIS
Pre-Approval Required	<p>Consultation and approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for diagnostic laboratory testing.</p> <p>Immunity screen requires IgG determination only.</p> <p>To report suspect case, the Vaccine Preventable Disease Program can be reached weekdays 7:30 am – 5:00 pm by calling 213-351-7800. Ask to speak to the Epidemiologist on duty.</p> <p>During non-business hours (before 7:30 am, after 5:00 pm, or weekends) call 213-974-1234 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Required Specimen Type(s)	Serum
Minimum Volume Required	1 mL (minimum 0.25 mL)
Storage/Transport Conditions	Store refrigerated at 2 to 8°C. Transport on cold pack. If testing is to be delayed longer than 5 days, the samples should be frozen at -20°C or colder.
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, specimen type.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Indirect immunofluorescent assay (IFA)
Turnaround Time	2 business days
Interferences & Limitations	<p>The results of a single antibody determination should not be used to diagnose recent infection.</p> <p>To confirm acute infection, paired samples are required. The first sample (acute) should be taken as soon as possible after the clinical signs of infection. The second (convalescent) sample should be taken within 10-14 days of the first.</p> <p>A significant rise in titer should be used to confirm a clinical diagnosis of atypical varicella zoster infection only if a patient is tested concurrently for herpes simplex virus and does not demonstrate a concurrent significant rise in titer to herpes simplex.</p>
Additional Information	None
Reference Range	Serum < 8, No Antibody Detected
CPT Code(s)	86787
LOINC Code	6569-8



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Varicella zoster virus IgG Antibody

Other Name(s)	Chicken pox, LIAISON® VZV IgG assay
LIMS Code	VZVG
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Serum: Collect blood in red top or gold top serum separator tube (SST). Separate serum from clot within one hour of phlebotomy or as soon as possible.
Minimum Volume Required	1 mL serum
Storage/Transport Conditions	Store refrigerated at 2-8°C. Ship on cold packs within 2 days of sample collection.
Transport Medium	Not Applicable
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship samples via courier service.
Test Methodology	Chemiluminescence immunoassay (CLIA)
Turnaround Time	2 business days
Interferences & Limitations	Performance characteristics with individuals vaccinated with VZV (ROD strain) have not been established. Performance of human anti-mouse antibodies and rheumatoid factor samples have not been established and may occasionally influence results. Grossly hemolyzed, lipemic or contaminated samples are unacceptable.
Additional Information	Immunity screen requires IgG determination only.
Reference Range	Vaccinated: Positive (Index > 165), Unvaccinated: Negative (Index < 135).
CPT Code(s)	86787
LOINC Code	15410-4



COUNTY OF LOS ANGELES

Public Health

Los Angeles County Public Health Laboratories

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West Nile Virus IgG and IgM Antibodies, EIA (Serum)

Other Name(s)	WNV
LIMS Code	WNVS
Pre-Approval Required	<p>Testing limited to West Nile Virus season (May to November)</p> <p>Consultation and approval are required by West Nile Virus Coordinator at (ACDC) Acute Communicable Disease Center by calling 213-240-7941 during normal business hours from 8:00 am to 5:00 pm.</p> <p>Critical after-hours consultation is available by contacting the county operator and asking for the after-hours doctor on call at 213-974-1234.</p> <p>ACDC recommends that physicians and other medical providers order WNV screening tests for all patients with aseptic meningitis, encephalitis, or acute flaccid paralysis, as well as those who are experiencing a nonspecific illness compatible with WNV fever during the WNV season.</p>
Supplemental Information and Required Form(s)	<p>Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm</p>
Acceptable Specimen Type(s)	Serum
Minimum Volume Required	1 mL (minimum 0.7 mL)
Storage/Transport Conditions	Store refrigerated at 2-8 °C. Transport on cold packs.
Transport Medium	None
Specimen Labeling	<p>Patient full name, DOB, MRN, date collected, and specimen type, if applicable.</p> <p>Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.</p>
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Enzyme-linked Immunosorbent Assay (ELISA)
Turnaround Time	4 business days
Interferences & Limitations	<p>The performance of this assay has not been established for ruling out diseases with similar symptoms, e.g., herpes simplex virus encephalitis, enterovirus encephalitis, bacterial meningitis, causes of non-infectious encephalitis, or post- infectious encephalitis.</p> <p>IgM assay may cross-react with antibodies produced to other flaviviruses.</p> <p>IgG assay cross-reactivity has been noted with some specimens containing antibody to cytomegalovirus (CMV).</p>
Additional Information	All results from this and other serologies must be correlated with clinical history, epidemiological data, and other data available to the attending physician in evaluating the patient. Positive results must be confirmed by neutralization test, or by using the current CDC guidelines for diagnosing West Nile encephalitis.
Reference Range	Negative
CPT Code(s)	86788; 86789
LOINC Code	55402-2



Toxicology



Los Angeles County Public Health Laboratories

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Phone (562) 658-1300 Fax (562) 401-5999

Lead, Blood

Other Name(s)	Pb, Blood
LIMS Code	BLEAD
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	3 mL whole blood collected in a K2 EDTA (tan-top) tube
Minimum Volume Required	0.5 mL
Storage/Transport Conditions	Store refrigerated. Transport on cold packs using double biohazard specimen bags.
Transport Medium	K2 EDTA (tan-top) tube
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	Send specimens using regular courier services
Test Methodology	Graphite Furnace Atomic Absorption Spectrometry (Atomic Spectrometry)
Turnaround Time	1 – 3 business days
Interferences & Limitations	To minimize false positive results care must be taken to avoid lead contamination when drawing blood. Alcohol swabs, paper towels, collection tubes should be lead-free. Use powderless gloves.
Additional Information	This test is specific for lead, and does not detect any other elements
Reference Range	Birth – 6 Years = <5 µg/dl 6 years and above = <10 µg/dl
CPT Code(s)	83655
LOINC Code	77307-7



Viral Load Genotyping



Los Angeles County Public Health Laboratories

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Hepatitis C Genotyping

Other Name(s)	Genotype Drug Resistance, HCV, Hepatitis C virus
LIMS Code	HCVG
Pre-Approval Required	Documentation of positive Hepatitis C screen; HCV viral load > 500 IU/mL is required. Prior approval is also required by eConsult.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm eConsult approval print out must accompany test request form (DHS and associated clinics only).
Required Specimen Type(s)	Whole blood collected in lavender top EDTA plastic vacutainer tube
Minimum Volume Required	2 mL processed plasma
Storage/Transport Conditions	Freshly drawn whole blood may be held at 2 to 30°C for up to 6 hours prior to centrifugation. After centrifugation, remove plasma from cells and transfer to polypropylene aliquot tube. Processed specimens if stored at 2-8°C must be received within 72 hours of collection otherwise freeze at -20°C. Transport frozen on dry ice.
Specimen Labeling	Patient full name, DOB, MRN, date collected Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship frozen on dry ice. Specimens should be packaged and labeled in compliance with applicable state and federal regulations covering the transport of clinical specimens and etiologic agents/infectious substances.
Test Methodology	Real-Time PCR
Turnaround Time	5 business days
Interferences & Limitations	This test assay is not for screening blood, plasma, serum, or tissue donors for HCV, or to be used as a diagnostic test to confirm the presence of HCV infection. Exposure of plasma samples to elevated room temperature for 24 hours or longer should be avoided. Multiple freeze/thaw cycles should be avoided and should not exceed 3 freeze/thaw cycles.
Additional Information	Used for prognosis and treatment selection in chronically infected Hepatitis C patients This assay provides qualitative identification of Hepatitis C virus genotypes 1, 1a, 1b, and 2 – 5; Genotype 6 may be reported as detected without qualitative identification.
Reference Range	No Resistance Detected
CPT Code(s)	87902
LOINC Code	32286-7



Los Angeles County Public Health Laboratories

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Hepatitis C Viral RNA, Quantitative, Real-Time PCR

Other Name(s)	Hepatitis C Viral Load
LIMS Code	HCVL
Pre-Approval Required	Documentation of positive Hepatitis C screen is required. Prior approval is also required by eConsult.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm eConsult approval print out must accompany test request form (DHS and associated clinics only).
Required Specimen Type(s)	Plasma collected in EDTA (lavender-top) plastic vacutainer tube
Minimum Volume Required	2 mL processed plasma
Storage/Transport Conditions	Freshly drawn whole blood may be held at 2 to 30°C for up to 6 hours prior to centrifugation. After centrifugation, remove plasma from cells and transfer to screw-cap polypropylene tube. Processed specimens if stored at 2-8°C must be received within 72 hours of collection otherwise freeze at -20°C. Transport frozen on dry ice.
Specimen Labeling	Patient full name, DOB, MRN, date collected Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship/transport frozen on dry ice. Specimens should be packaged and labeled in compliance with applicable state and federal regulations covering the transport of clinical specimens and etiologic agents/infectious substances.
Test Methodology	Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	5 business days
Interferences & Limitations	This test assay is not for screening blood, plasma, serum, or tissue donors for HCV, or to be used as a diagnostic test to confirm the presence of HCV infection. Exposure of plasma or serum samples to elevated room temperature for 24 hours or longer should be avoided. Multiple freeze/thaw cycles should be avoided.
Additional Information	Ordered after Hepatitis C status confirmed and used for monitoring chronic disease The quantitative range of this assay is 1.08-8.0 log IU/mL (12-100,000,000 IU/mL) with limit of detection (LOD) at 12 IU/mL (1.08 log IU/mL).
Reference Range	Not Detected
CPT Code(s)	87522
LOINC Code	50023-1



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HIV-1 Genotyping

Other Name(s)	HIV-1 Genotype Drug Resistance
Test Code	HIVG
Pre-Approval Required	None, but must have a recent viral load of ≥ 2000 copies/ ml.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Plasma only Collect whole blood in a sterile EDTA anticoagulant tube (purple top) or a gel separator type tube (Vacutainer™ PPT™ Brand tubes, Becton-Dickinson #362788, or equivalent) and immediately invert the tube 8 to 10 times to mix. Centrifuge the tubes at 1,000 to 2,000 x g at room temperature (15 to 25°C) for 15 minutes. If using an EDTA purple top tube, transfer the plasma to a sterile polypropylene tube within 6 hours of collection. If using a PPT type tube, transfer the plasma to a sterile polypropylene tube within 2 hours of collection. Freeze plasma at -65 to -80°C until shipped
Minimum Volume Required	2 mL plasma
Storage/Transport Conditions	Plasma may be shipped at 2 to 8°C for delivery within 24 hours, or ship specimens frozen at -70°C on dry ice. Store plasma samples at -65 to -80°C until used
Specimen Labeling	Patient full name, DOB, MRN, date collected. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship plasma at 2 to 8°C for delivery within 24 hours, or ship the tubes with the plasma frozen at -70°C or less on dry ice.
Test Methodology	Identification of mutations within HIV-1 pol gene region, Sequencing.
Turnaround Time	7 business days
Interferences & Limitations	Do not use heparin as an anticoagulant. Do not use plasma after more than 2 freeze-thaw cycles.
Additional Information	Abbott ViroSeq HIV-1 Genotyping System for Detecting Genomic Mutations known to confer Drug Resistance to specific anti-Retroviral Drugs
Reference Range	No resistance detected.
CPT Code(s)	87901
LOINC Code	80689-3



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HIV-1 RNA, Quantitative, Real-Time PCR

Other Name(s)	HIV-1 Viral Load
Test Code	HIVL
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Plasma only. Blood collected in K3EDTA (lavender top) or ACD-A(Acid Citrate Dextrose) (yellow top) Whole blood may be held at 15-30°C for up to 6 hours or at 2-8°C for up to 24 hours, prior to centrifugation. Separate plasma from whole blood by centrifugation at 800-1600 x g for 20 minutes at room temperature. Transfer plasma to sterile tubes or vials.
Minimum Volume Required	3 mL
Storage/Transport Conditions	Plasma may be stored at 15-30°C for up to 24 hours or at 2-8°C for up to 5 days. If longer storage is required, plasma specimens must be stored at -70°C NOTE: If frozen specimens thaw, they may be stored at 2-8°C for up to 6 hours.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, complete submitter information (name, address, phone #), and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship frozen on dry ice.
Test Methodology	Real-Time Polymerase Chain Reaction (RT-PCR)
Turnaround Time	5 business days
Interferences & Limitations	Collections in heparin coated tubes are unacceptable due to heparin interference with PCR amplification.
Additional Information	
Reference Range	Lower limit of detection <40 copies/ml Upper limit of detection 10,000,000 copies/ml
CPT Code(s)	87536
LOINC Code	48511-0



Virology



COUNTY OF LOS ANGELES

Public Health

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Chlamydia species, Culture and Identification

Other Name(s)	CT
LIMS Code	CT
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Endocervical swab, urethral swab, conjunctiva (eye) swab, nasopharyngeal swab, throat swab, rectal mucosal swab, nasal aspirates.
Minimum Volume Required	Swab placed in 3.0 ml viral transport media
Storage/Transport Conditions	Store refrigerated. Transport to the laboratory within 24 hours of collection with cold packs.
Transport Medium	Viral transport media (VTM) or universal transport media (UTM)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Endocervix: Remove excess mucus from cervix; insert Dacron®-tipped swab into cervical canal. Male urethra: Patient should not have urinated for at least 1 hour prior to sample collection. Insert sterile Dacron®-tipped swab with fine shaft 2-4 cm into urethra using a rotating motion to facilitate insertion Conjunctiva (eye): Gently swab the lower conjunctiva with a Dacron®-tipped swab to collect mucous membrane cells. Nasal aspirates: Collected by aspiration in infants. Nasopharynx: Insert Dacron®-tipped swab with fine-plastic shaft gently into one or both anterior nares to the posterior pharynx. Rotate swab to collect mucous membrane cells and withdraw. Throat: Swab the posterior pharynx vigorously with a Dacron®-tipped swab with plastic shaft. Rectal mucosa: Insert Dacron®-tipped swab with plastic shaft 1 cm past the anal sphincter, rotate it in firm contact with the mucosal surfaces and withdraw.
Test Methodology	Culture in McCoy shell vials, Direct Fluorescence Antibody (DFA)
Turnaround Time	3 days
Interferences & Limitations	Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended because it can cause false-negative result. Bacterial transport media such as LQ Stuart (green or red top), Amies (with or without charcoal) contain antiviral substances and render the sample unsatisfactory for virus isolation attempts.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87110; 87140
LOINC Code	6349-5



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Cytomegalovirus, Viral Culture and Identification

Other Name(s)	CMV
LIMS Code	CMVC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Urine, whole blood, fetal wastage, biopsy/autopsy tissue, CSF
Minimum Volume Required	Urine: 5.0 to 10 mL Blood: 5 mL Biopsy/autopsy tissue: 1 – 2 grams CSF: 2 mL
Storage/Transport Conditions	Store refrigerated. Transport with cold pack within 48 hours of collection
Transport Medium	Urine: Sterile urine container Blood: EDTA (lavender-top) Vacutainer® or ACD tube Biopsy or autopsy tissue: Sterile container, no preservative CSF: Sterile tube, no preservative
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Urine: Collect in sterile container, no preservative Whole blood: Collect in EDTA or ACD tube with anticoagulant Fetal wastage, biopsy/autopsy tissue: Collect each specimen using aseptic technique. Place in separate container. Collect autopsy specimens as soon as possible and biopsy specimens as soon as after onset of symptoms as possible. CSF: Do not dilute CSF.
Test Methodology	Culture in shell vials and MRC-5 cell culture tubes; Indirect Immunofluorescence Assay (IFA)
Turnaround Time	Rapid shell vial method: 2 to 3 days. Conventional tube culture: 30 days
Interferences & Limitations	Do not freeze specimen if clinical background indicates CMV.
Additional Information	
Reference Range	Negative
CPT Code(s)	87252; 87254
LOINC Code	5838-8



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Herpes simplex virus, Viral Culture and Identification

Other Name(s)	HSV conventional culture
LIMS Code	HSVC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Vesicle fluid, eye swab, corneal scrapings, autopsy tissue, brain biopsy tissue, CSF, throat swab, throat washes
Minimum Volume Required	CSF: 0.5 ml Throat swabs or washings: 3 ml Other specimen swabs: 3.0 ml viral transport media Autopsy or brain biopsy tissues: 1 to 2 grams
Storage/Transport Conditions	Place swab in viral transport media soon after collection. Store refrigerated (2 - 8°C). If specimen cannot be transported to the laboratory within 48 hours of collection, store at -70°C.
Transport Medium	Swabs: Viral transport medium (VTM) or universal transport medium (UTM) CSF: Sterile tube, no preservative Autopsy or brain biopsy tissue: Sterile container
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Vesicle fluid: Collect the fluid from several fresh vesicles. Either aspirate the fluids using a syringe fitted with a 26G needle or collect the fluids and cells with swab. Eye swab or corneal scraping: Swab the inflamed conjunctiva or corneal lesions. Autopsy or brain biopsy tissues: Collect each specimen using aseptic technique. Place in separate container. Collect autopsy specimens as soon as possible and biopsy specimens as soon as after onset of symptoms as possible. CSF: collect in sterile tube. Do not dilute CSF. Throat swabs or washings: swab the affected area or have patient gargle with sterile buffered saline. Ship refrigerated specimens on cold packs. Ship frozen specimens on dry ice.
Test Methodology	Conventional cell culture, Direct Fluorescence Antibody (DFA)
Turnaround Time	7 days
Interferences & Limitations	Herpes simplex virus are not usually recovered from healing lesions Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended, as they may contain substances that cause false-negative results.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87252; 87140 x 2

LOINC Code	5859-4
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Herpes simplex virus Type 1 and 2 DNA, Qualitative Real-Time PCR

Other Name(s)	HSV
LIMS Code	HSVPCR
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Genital Swabs (vaginal, vulvar, labial, cervical, scrotum and penile) and Non-genital Swabs (lip, oral, and rectal) are the only acceptable specimen types
Minimum Volume Required	3.0 mL of Universal or Viral Transport media.
Storage/Transport Conditions	Store refrigerated at 2-8°C. Transport on cold pack. Specimens are stable up to 14 days at 2-8°C.
Transport Medium	Universal or Viral Transport Media
Specimen Labeling	Patient full name, DOB, MRN, date collected. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	After collecting specimen insert swab into collection tube and break at score-line. Specimens must be capped tightly, properly labeled, and placed in biohazard zipped seal bags. Transport at 2-8°C.
Test Methodology	Real Time Polymerase Chain Reaction (PCR)
Turnaround Time	4 business days
Interferences & Limitations	Specimen types listed are the only ones validated for this assay. Dacron tip or flocked swabs in Universal or Viral Transport media are the only acceptable specimen collection systems.
Additional Information	None
Reference Range	Not detected
CPT Code(s)	87529 x 2
LOINC Code	16130-7 (HSV1); 16131-5 (HSV2)



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Measles RNA, Qualitative Real-Time PCR

Other Name(s)	Rubeola
LIMS Code	MEVPCR
Pre-Approval Required	Consultation and pre-approval are required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for measles laboratory testing. The Vaccine Preventable Disease Program can be reached weekdays 7:30 AM - 5:00 PM by calling (213) 351-7800. Ask to speak to the Epidemiologist on duty. After 5:00 PM Monday thru Friday, weekends and holidays call the county operator (213) 974-1234, Option 8 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Throat swab (preferred) or Nasopharyngeal (NP) swab ideally obtained within 3 days of rash onset Urine collected midstream (first morning void preferred), clean-catch
Minimum Volume Required	3 mL of universal or viral transport media for swab 10 – 50 mL for urine (10 mL minimum)
Storage/Transport Conditions	Store at refrigerated (4-8° C) temperature. Swab samples should be submitted on cold packs as soon as possible and within 24 hours of collection. If transit time is longer, freeze specimen and transport on dry ice. (Do not freeze urine).
Transport Medium	Throat or NP swab: Universal or viral transport media (UTM) Urine: Screw cap, sterile container without preservatives
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 AM-5:00 PM, contact Central Accessioning at (562) 658-1460. After hours call 213-974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Real Time Polymerase Chain Reaction (PCR)
Turnaround Time	1-2 business days from sample receipt at the Public Health Laboratory
Interferences & Limitations	Specimen types listed are the only ones validated for this assay. Throat or nasopharyngeal: Dacron tip or flocked swabs in universal or viral transport media are the only acceptable specimen collection systems. Urine: Fresh, never frozen, unpreserved urine in a leakproof sterile container is the only acceptable specimen collection system. A negative result cannot rule out measles, particularly if the specimen is of poor quality or taken too late after illness onset. Measles PCR is not appropriate for asymptomatic contacts or to confirm immune status. Recent MMR immunization may result in a positive Measles PCR result.
Additional Information	Positive PCR samples will be forwarded to the State Public Health Laboratory for non-diagnostic epidemiological typing. Typing is required to differentiate vaccine strain from wild type Measles.

Reference Range	Not detected
CPT Code(s)	87798
LOINC Code	48508-6



Los Angeles County Public Health Laboratories

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Mumps RNA, Qualitative Real-Time PCR

Other Name(s)	Epidemic Parotitis
LIMS Code	MUVPCR
Pre-Approval Required	Consultation and pre-approval is required by the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program for mumps laboratory testing. The Vaccine Preventable Disease Program can be reached weekdays 7:30 AM - 5:00 PM by calling (213) 351-7800. Ask to speak to the Epidemiologist on duty. After 5:00 PM Monday thru Friday, weekends and holidays call the county operator (213) 974-1234, Option 8 and ask to speak to the after-hours physician serving as the Administrative Officer on Duty (AOD) before sending specimens to the Public Health Laboratory.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Buccal swab (see collection instruction video from the CDC at https://www.youtube.com/watch?v=ThvoJBjsUvQ) Specimens should ideally be obtained within 3 days of symptoms onset but may be collected up to 5 days after symptoms onset.
Minimum Volume Required	Buccal swab: In 3 mL of universal or viral transport media
Storage/Transport Conditions	Store at refrigerated (2-8°C) temperature. Swab samples should be submitted on cold packs as soon as possible and within 24 hours of collection. If transit time is longer, freeze specimen and transport on dry ice.
Transport Medium	Buccal swab: Universal or viral transport media
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable. Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 AM-5:00 PM, contact Central Accessioning at (562) 658-1460. After hours call 213-974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Real Time Polymerase Chain Reaction (PCR)
Turnaround Time	1 business day after specimen receipt at the Public Health Laboratory
Interferences & Limitations	Specimen types listed are the only ones validated for this assay. Assay cannot be performed on swabs collected in transport media for bacteria such as liquid Amies.
Additional Information	A negative result cannot rule out mumps, particularly if the specimen is of poor quality or taken too late after illness onset.
Reference Range	Not detected
CPT Code(s)	87798
LOINC Code	47532-7



Los Angeles County Public Health Laboratories

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Rabies Antigen Detection

Other Name(s)	Rabies FRA
LIMS Code	RAB
Pre-Approval Required	Pre-approval is required for submission of a rabies (hot head) with a potential human exposure and the specimen is considered high risk (i.e. wildlife, neurologic domestic animal, and imported animal). Contact the Los Angeles County Veterinary office to determine if the animal is considered a "hot head." Call (562) 658-1452/1451 or email the virology staff at the PHL prior to delivery of emergency head or animal.
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Severed head from large animal Complete carcass from small animal, such as a bat or rodent Brain material: unpreserved and unfrozen, brain stem and cerebellum must be included Brain material completely submerged in glycerol saline solution, not frozen
Minimum Volume Required	Not applicable
Storage/Transport Conditions	Transport at room temperature as soon as collected. Wrap specimen with adequate amount of absorbent material.
Transport Medium	Not applicable
Specimen Labeling	One unique identifier for animal specimen, date of collection and specimen type
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Fluorescence Rabies Antibody (FRA)
Turnaround Time	2 days
Interferences & Limitations	Test is limited by decomposed tissues due to denaturation of viral proteins
Additional Information	Unacceptable specimens: Specimen covered with fleas, ants and/or maggots. Substantial green color, liquefaction, desiccation, or unrecognizable gross anatomy
Reference Range	Negative
CPT Code(s)	87003; 87299
LOINC Code	6532-6



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Respiratory Viral Agents, Viral Culture and Identification

Other Name(s)	None
LIMS Code	RESP
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, lower respiratory tract specimens.
Minimum Volume Required	Swab placed in 3.0 ml viral transport media
Storage/Transport Conditions	Store refrigerated after specimen collection. Transport to the laboratory within 48 hours. If delay is anticipated, freeze specimen at -70° C.
Transport Medium	Viral transport medium (VTM) or universal transport medium (UTM)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Swab the affected area or have patient gargle with sterile buffered saline. Swab specimens should only be collected with a synthetic tip swab, such as nylon or Dacron®, and an aluminum or plastic shaft. Ship refrigerated specimens on cold packs. Ship frozen specimens on dry ice.
Test Methodology	Conventional cell culture, shell vial culture, Immunofluorescence Assay (IFA)
Turnaround Time	14 days
Interferences & Limitations	Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended. Gel-based viral transport media are not acceptable. Do not freeze any specimens for which the clinical background indicates RSV. Bacterial transport media such as Amies (with or without charcoal) contains antiviral substances and render the sample unsatisfactory for virus isolation attempts.
Additional Information	This test consists of culture and ID of Influenza A, Influenza B, Parainfluenza 1, Parainfluenza 2, Parainfluenza 3, Respiratory Syncytial Virus (RSV), and Adenovirus
Reference Range	Negative
CPT Code(s)	87252 (culture); 87253 (ID)
LOINC Code	32355-0



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Varicella zoster virus, Viral Culture and Identification

Other Name(s)	VZV, Chicken pox, shingles
LIMS Code	VZVC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Vesicle fluid, eye swab, corneal scrapings, throat swab, throat washings, rectal swab
Minimum Volume Required	Swab placed in 3.0 ml viral transport media
Storage/Transport Conditions	Store refrigerated after specimen collection. Transport to the laboratory within 48 hours.
Transport Medium	Viral transport medium (VTM) or universal transport medium (UTM)
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Vesicle fluid: collect the fluid from several fresh vesicles. Either aspirate the fluids using a syringe fitted with a 26G needle or collect the fluids and cells with swab Eye swab or corneal scraping: swab the inflamed conjunctiva or corneal lesions. Throat swab or washings: swab the affected area or have patient gargle with sterile buffered saline. Rectal swab: insert swab into the rectum. Ship on cold packs.
Test Methodology	Conventional cell culture, shell vial method, Direct Fluorescence Antibody (DFA)
Turnaround Time	14 business days
Interferences & Limitations	Varicella zoster virus are not usually recovered from healing lesions. Do not freeze any specimen which has clinical background indicating VZV. Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended because it can cause false-negative result.
Additional Information	None
Reference Range	Negative
CPT Code(s)	87252, 87253
LOINC Code	10860-5



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Viral Antigen, Immunofluorescence

Other Name(s)	Identification of viral antigen on slide
LIMS Code	SLIDE
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Required Specimen Type(s)	Vesicle fluid: collect the fluid from several fresh vesicles. Either aspirate the fluids using a syringe fitted with a 26G needle or collect the fluids and cells with swab
Minimum Volume Required	Not Applicable
Storage/Transport Conditions	Place swab in viral transport medium after collection. Store at refrigeration temperature (2- 8°C) after collection. Ship in cold pack to the laboratory within 48 hours after collection.
Transport Medium	Viral transport medium (VTM) for swab
Specimen Labeling	Patient full name, DOB, MRN, date collected
Shipping Instructions and Specimen Handling Requirements	To schedule a courier during regular business hours M-F 8:00 am – 5:00 pm, contact Central Accessioning at (562) 658-1460. After hours call (213) 974-1234 and ask for the Public Health Laboratory Director.
Test Methodology	Direct Fluorescence Antibody (DFA), indirect Fluorescence Antibody (IFA)
Turnaround Time	14 days
Interferences & Limitations	If no cells are observed on prepared smear, it is unsatisfactory.
Additional Information	
Reference Range	Negative
CPT Code(s)	87206
LOINC Code	35347-4



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Viral Culture Comprehensive, Culture and Identification

Other Name(s)	None
LIMS Code	VC
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Vesicle fluid, endocervical swab, endo-urethral swab; eye swab or corneal scrapings, throat swab, nasopharyngeal swab, washings, transtracheal aspirate; rectal swab, feces; CSF; biopsy or autopsy tissue; urine, body fluids, blood
Minimum Volume Required	Swabs in 3.0 ml viral transport media Feces: 1-2 grams CSF: 2 ml Urine: 5 to 10 ml Body fluids other than urine: 2-3 ml Biopsy or autopsy tissue: 1 to 2 grams Blood: 5.0 ml
Storage/Transport Conditions	Blood: EDTA or citrate tube. Store and transport at room temperature. Swabs: Store refrigerated and transport with cold packs Vesicle fluid, feces, CSF, urine, body fluids: Store refrigerated and transport with cold packs. Freeze at -70° C or lower if the specimen is to be held longer than 48 hours. Transport on dry ice. Do not freeze any specimens for which the clinical background indicates CMV, RSV, and VZV.
Transport Medium	Viral transport medium (VTM) or universal transport medium ((UTM) for swab. All other sources see below.
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Vesicle fluid, endocervical and endourethral swab: Collect the fluid from several fresh vesicles. Either aspirate the fluids using a syringe fitted with a 26G needle or collect the fluids and cells with swab. Eye swab or corneal scraping: Swab the inflamed conjunctiva or corneal lesions. Throat swabs, nasopharyngeal swab, washings, transtracheal aspirate: Swab the affected area or have patient gargle with sterile buffered saline. Rectal swab: Insert swab into the rectum. Feces: Collect fresh stool. Place stool in sterile container without preservative CSF: collect in sterile tube. Do not dilute CSF. Biopsy or autopsy tissue: Collect autopsy specimens as soon as possible and biopsy specimens as soon after onset of symptoms as possible. Urine: Should be a primary A.M. void. Collect in a sterile screw cap container. Body fluids other than blood or urine: Collect using aseptic technique Blood: Collect in EDTA lavender top vacutainer or ACD tube
Test Methodology	Conventional cell culture, Direct Fluorescence Antibody (DFA), Indirect Immunofluorescence Assay (IFA)
Turnaround Time	14 days

Interferences & Limitations	<p>Varicella zoster virus (VZV) and Herpes simplex virus (HSV) are not usually recovered from healing lesions.</p> <p>Do not freeze any specimen which has clinical background indicating VZV, CMV, and RSV. Isolation of an enterovirus from the CSF is most productive within 2-3 days after onset of CNS manifestation.</p> <p>Specimens collected with a wooden shaft or calcium alginate swab are unacceptable. Bacterial transport media such as Amies (with or without charcoal) contain antiviral substances and render the sample unsatisfactory for virus isolation attempts.</p>
Additional Information	This test consists of culture and ID of respiratory viruses (Influenza A, Influenza B, Parainfluenza 1, 2, 3, RSV, Adenovirus); Enteroviruses (Echoviruses, Polio, Coxsackie); and HSV, VZV, CMV
Reference Range	Negative
CPT Code(s)	87252 (culture); 87253 (Identification)
LOINC Code	6584-7



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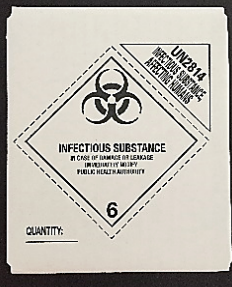
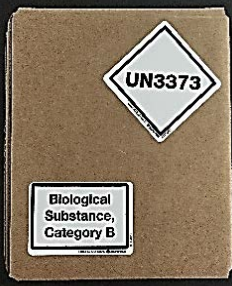



Viral Isolate Identification

Other Name(s)	None
LIMS Code	VID
Pre-Approval Required	None
Supplemental Information and Required Form(s)	Los Angeles County PHL Test Request Form http://www.publichealth.lacounty.gov/lab/labforms.htm
Acceptable Specimen Type(s)	Viral isolate
Minimum Volume Required	0.5 ml
Storage/Transport Conditions	Transport conventional culture tube at ambient temperature Transport viral isolate frozen
Transport Medium	None
Specimen Labeling	Patient full name, DOB, MRN, date collected, and specimen type, if applicable Test subject to CLIA regulations and requires two unique patient identifiers on the primary specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. The identifiers must be clearly labeled on specimen and must match to information on the requisition form.
Shipping Instructions and Specimen Handling Requirements	Ship conventional culture tubes with the maintenance medium filled to the cap before shipping.
Test Methodology	Conventional cell culture, Direct Fluorescence Antibody (DFA), Indirect Immunofluorescence Antibody (IFA)
Turnaround Time	14 days
Interferences & Limitations	
Additional Information	Identification of respiratory viruses (Influenza A, Influenza B, Parainfluenza 1, 2, 3, RSV, Adenovirus); Enteroviruses (Echoviruses, Polio, Coxsackie); <i>Herpes simplex</i> virus, <i>Varicella zoster</i> virus, <i>Cytomegalovirus</i>
Reference Range	By report
CPT Code(s)	87252 (culture); 87253 (ID)
LOINC Code	6608-4



Appendix






**SPECIMEN COLLECTION SUPPLIES PROVIDED
BY THE PUBLIC HEALTH LAB**

Image	Description	Common Tests/Usage
	<p>Mailer for Infectious Substance, Affecting Humans, Category A Includes fibreboard box with UN2814 label, fibreboard coil, secondary pressure receptacle with lid, label for itemized list of contents, absorbent and bubble wrap.</p>	<p>For submittal of Title 17, CCR, § 2505 Cultures for Identification (Examples: TB, STEC, select agent rule out)</p>
	<p>Mailer for Biological Substance, Category B Includes fibreboard box with UN3373 label, fibreboard coil, secondary pressure receptacle with lid, label for itemized list of contents, absorbent and bubble wrap.</p>	<p>For submittal of Biological Substance, Category B (Examples: body fluids, blood and its components, tissue for diagnostic or investigational purposes)</p>
	<p>BD™ Universal Viral Transport Media Includes 3 ml tube medium with flocked swabs (1-regular and 1- flex mini-tip) to collect and transport samples.</p>	<p>Culture of respiratory viral agents, HSV, VZV, Chlamydia. Also used for <i>Bordetella pertussis</i> and measles, mumps PCR test collection.</p>
	<p>Biohazard Specimen Bags, (5 x 8.5”), QTY. 50/Pack A leak-proof 3-wall bag with a double compartment, one with zip-lock for specimen and one for test request form.</p>	<p>For safe transport of specimen to the laboratory</p>
	<p>Para-Pak® Clean Vials, QTY. 20/Pack Stool transport vial without preservative or transport medium. The leak-proof 30 ml vial contains a built-in spoon for safe and easy transfer of the specimen.</p>	<p>Norovirus NAAT</p>


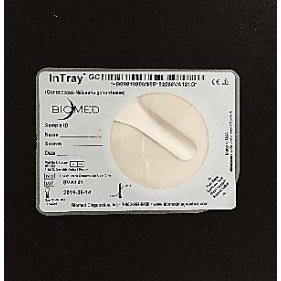

**SPECIMEN COLLECTION SUPPLIES PROVIDED
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Image	Description	Common Tests/Usage
	<p>HIV-1 Viral Load Plasma Storage Tubes and Caps, QTY. 100/Bag Green polyethylene screw cap, transport tube with etched fill lines in 1 ml increments up to 8 ml</p>	<p>For transport of frozen plasma for HCV and HIV-1 viral load detection</p>
	<p>10% Formalin Vial, QTY. 1/Each 10% formalin fixative for the collection of parasitology specimens.</p>	<p>For Ova and Parasite detection</p>
	<p>Pinworm Paddle (Swube), QTY. 1/each: For the collection of specimen from the anal region. Specimen collection “paddle” consists of a clear plastic surface with adhesive on one side.</p>	<p>Pinworm screening for presence of <i>Enterobius vermicularis</i> eggs.</p>
	<p>Specimen Source Labels, QTY. 760/roll Color coded labels: Vaginal (orange) Rectal (blue) Throat (purple) Plasma (green) Trichomonas (pink) Special handling (pink)</p>	<p>To distinguish specimen source</p>
	<p>Hologic® Aptima® Urine Specimen Collection Kits, QTY. 50/box To detect the presence of <i>C. trachomatis</i>, <i>N. gonorrhoea</i> and <i>T. vaginalis</i> in female urine specimens. Yellow labeled collection kit.</p>	<p>Chlamydia/Gonorrhoea NAAT and Trichomonas NAAT</p>




**SPECIMEN COLLECTION SUPPLIES PROVIDED
BY THE PUBLIC HEALTH LAB**

Image	Description	Common Tests/Usage
	<p>Hologic® Aptima® Unisex 2-Swab Specimen Collection Kits, QTY. 50/box A unisex swab for both male and female specimens. Includes tube specimen transport medium and two swabs (1- cleaning (white shaft) and 1- specimen collection (blue shaft). White/purple labeled collection kit.</p>	<p>Chlamydia/Gonorrhea NAAT and Trichomonas NAAT for endocervical and urethral specimens.</p>
	<p>Hologic® Aptima® Multitest Swab Specimen Collection Kits, QTY. 50/box Includes specimen collection swab and tube specimen transport medium. Orange labeled collection kit.</p>	<p>Chlamydia/Gonorrhea NAAT in vaginal and rectal sources. Gonorrhea NAAT in throat and <i>Trichomonas vaginalis</i> NAAT for vaginal specimens.</p>
	<p>Sputocol™ Sputum Collection System, QTY. 72/Case Includes 50 ml tube with screw cap, funnel, base, base cover, label and instructions for use.</p>	<p><i>Mycobacterium tuberculosis</i> culture - sputum</p>
	<p>90 ml Sterile Cup, 100/bag Leak-proof, plastic screw cap sterile specimen cup without any preservative</p>	<p>Urine and stool collection</p>
	<p>Amies Transport Swab QTY. 1/each Culture swab collection system</p>	<p><i>Corynebacterium diphtheria</i> (Diphtheria) culture <i>Haemophilus ducreyi</i> (Chancroid culture)</p>

**SPECIMEN COLLECTION SUPPLIES PROVIDED
BY THE PUBLIC HEALTH LAB**

Image	Description	Common Tests/Usage
	<p>Regan-Lowe Transport Media, QTY. 1/each Solid charcoal blood medium with Cephalexin for selective isolation of <i>Bordetella pertussis</i> and <i>Bordetella parapertussis</i> from clinical specimens.</p>	<p><i>Bordetella pertussis</i> (Whooping cough) culture</p>
	<p>Neisseria gonorrhoeae Culture Plate (InTray™ GC) QTY. 1/each A fully enclosed system for sample collection, transport, culture and identification of <i>Neisseria gonorrhoeae</i>.</p>	<p><i>Neisseria gonorrhoeae</i> culture</p>
	<p>Para-Pak® C&S, QTY. 20/Pack (Culture and Sensitivity) Non-nutritive stool transport solution for enteric pathogens, 15 mL</p>	<p>Salmonella/Shigella, E. coli STEC, and other enteric pathogens culture</p>
	<p>Z-PVA Parasitology Transport Media, QTY. 25/Pack For the collection of stool for the identification of intestinal parasites.</p>	<p>Ova and Parasite Exam-Stool</p>
	<p>QuantIFERON® TB Gold Plus (QFT®- Plus) blood collection tubes, QTY. 25 /Pack 1 set consists of 4 color coded tubes: gray cap, green cap, yellow cap and purple cap.</p>	<p>QuantIFERON® - TB Gold Plus 4-tubes</p>

**SPECIMEN COLLECTION SUPPLIES PROVIDED
BY THE PUBLIC HEALTH LAB**

Image	Description	Common Tests/Usage
	<p>Puritan® Calcium Alginate Swab, QTY. 50/Box Sterile urethro-genital calcium alginate tipped swab with flexible 5.4 in., aluminum shaft.</p>	<p>For urethral specimen collection for <i>Neisseria gonorrhoeae</i> culture</p>
	<p>ESwab™ Collection and Transport System, QTY. 1/Each Flocked swab with 1 ml of liquid Amies in a plastic, screw cap tube</p>	<p>Swab for throat or wound specimen collection for culture of Group A <i>Streptococcus</i></p>
	<p>Protocult™ Stool Collection Kit, QTY 1/Each Kit contains one stool specimen collection device, patient instructions sheet, Para-Pak® clean transport vial with spoon</p>	<p>For GI outbreaks</p>