County of San Luis Obispo Public Health Laboratory

Test Catalog

2191 Johnson Avenue, San Luis Obispo, CA 93401
Telephone: (805) 781-5507
Fax: (805) 781-1023

Hours
Monday to Friday: 8 am to 5 pm
Weekends: On-call ([805]-305-8188)

Laboratory Director: Glen M. Miller, PhD, HCLD (ABB)

Accreditations
CLIA: 05D0695770
CDPH Laboratory License: CDPH-0001260
ELAP: 2114
Federal Tax ID: 956000939
NPI: 1437103983

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IV. Reportable diseases

I. Contact information

County of San Luis Obispo Public Health Laboratory
2191 Johnson Avenue
San Luis Obispo, CA 93401
Phone: (805) 781-5507
Fax: (805) 781-1023

Laboratory Director
Glen M. Miller, PhD, HCLD
Phone: (805) 781-5512
Email: gmmiller@co.slo.ca.us

Supervising Public Health Microbiologist
Lucia Martinez
Phone: (805) 781-5509
Email: lmartinez@co.slo.ca.us

Microbiologist on call (weekends)
Phone: (805) 781-5508

County of San Luis Obispo Infectious Diseases
Phone: (805) 781-5500
Fax: (805) 781-5543

II. Laboratory requisitions

a. Requisition for clinical specimens

COUNTY OF SAN LUIS OBISPO
PUBLIC HEALTH LABORATORY
2191 Johnson Avenue, San Luis Obispo, CA 93401
Ph: 805-781-5507 FAX: 805-781-1023
www.sloPublicHealth.org/lab
CLIA: 05D0695770

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PATIENT (or affix patient label below)		
Last Name	First Name	Middle Initial
Medical record #		
Residential Address	☐ Same as Submitter Location	
City	State	Zip
DOB	☐ Male ☐ Female ☐ Other:	
Phone	Pregnancy Status	
Race	Ethnicity	
By signing here, the patient consents to be notified of results via text:		

SUBMITTER (Lab/Clinic/Medical Group)		
Account #		
Submitter Name		
Street Address		
City	State	Zip
Phone	Fax	
Name of Contact		
Ordering/Supervising Physician		
Signature of Physician or Authorized Representative (must be legible)		

SPECIMEN	
Collection Date	Collection Time
ICD-10 Codes (Include codes for Urine & Herpes cultures for FPACT patients)	
Codes	
CLINICAL HISTORY (Optional except for Reportable Conditions)	
Date of Onset	Symptoms
Reason for Today's Visit	
☐ Case ☐ Contact ☐ Carrier ☐ TOC	

BILLING			
Insurance (provide copy of front & back of insurance card AND demographics)			
Insurance ID#			
☐ CenCal Health ☐ Medi-Cal ☐ Medicare ☐ FPACT ☐ Other Insurance (please specify:			
Payment type (if NOT billed to Insurance)			
☐ VISA ☐ MC ☐ Check# _____ ☐ Cash			
Card #	CVV#	Exp. Date	
Amount Paid $	☐ Fee Waived (add reason under COMMENTS)		

SPECIMEN SOURCE			
☐ Aspirate	☐ *Nails	☐ Sputum	☐ Urine (Aptima)
☐ Blood, whole	☐ Nasal swab in VTM	☐ Stool	☐ Urine (sterile cup)
☐ Bronchial wash	☐ Nasopharynx swab in VTM	☐ Throat swab in VTM	☐ Vaginal swab
☐ Cervical swab	☐ Rectal swab (Aptima)	☐ Throat swab (Aptima)	☐ Other/Source/Location (*specify*):
☐ CSF	☐ Serum	☐ *Tissue	
☐ *Fluid	☐ *Skin	☐ Urethral swab	**Specify source or location on body*

TEST ORDER (Numeric codes for lab use only and subject to change)							
STI, Blood, & Urine		**Respiratory**		**Gastrointestinal & Parasites**		**Mycology & Rash**	
☐ Chlamydia NAAT	*2750*	☐ Acid fast culture/smear	*3545*	☐ Gastropathogen panel (GP)	*6500*	☐ Mycology culture for ID	*3910*
☐ Gonorrhea NAAT	2770	☐ AFB isolate for ID	*3555*	☐ Norovirus NAAT	*6100*	☐ Mycology primary culture	*3905*
☐ Trichomonas NAAT	*2850*	☐ MTB complex NAAT	*3530*	☐ Stool culture–Standard	*2200*	☐ Measles PCR	*6180*
☐ Mycoplasma genitalium NAAT	*2870*	☐ MALDI-TOF mycobacterial ID	*3560*	☐ Stool culture–Comprehensive	*2300*	☐ Mumps PCR	*6170*
☐ Herpes Virus NAAT	*6840*	☐ Quantiferon Plus	*8800*	☐ Salmonella culture	*2220*	☐ Poxvirus (mpox) PCR	*6170*
☐ HIV antibody	*5500*	☐ Influenza NAAT	*51005*	☐ Shigella culture	*2230*	☐ Varicella Zoster NAAT	*6900*
☐ HIV antibody differentiation (confirmatory)	*5700*	☐ SC2/Flu NAAT	*51000*	☐ Campylobacter culture	*2240*	Other	
☐ Syphilis screen: RPR	*5035*	☐ SC2/Flu/RSV NAAT	*52000*	☐ E. coli Shiga toxin-producing culture	*2250*	☐ Bacterial isolate for ID	*2085*
☐ Syphilis confirmation: TPPA	*5065*	☐ Respiratory panel (RP) includes pertussis	*6310*	☐ Parasite blood smear exam	*4040*	☐ Bacterial primary culture	*2025*
☐ Syphilis screen in CSF: VDRL	*5060*	☐ SARS-CoV-2 WGS screen	*9070*	☐ Tick species ID	*4015*	☐ Carba-R test	*2350*
						☐ Other (specify):	
Note: Alternate codes may be used for Influenza NAAT (52020), SC2/Flu NAAT (52010).							
Please contact the Laboratory for questions, reference specimens, and other tests.							
COMMENTS:							

Req 100 Generic (6/3/2026)

b. Requisition for water samples

COUNTY OF SAN LUIS OBISPO
PUBLIC HEALTH LABORATORY
2191 Johnson Avenue, San Luis Obispo, CA 93401
Ph: 805-781-5507 Fax: 805-781-1023
www.sloPublicHealth.org/lab
ELAP certificate #: 2114

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SAMPLE COLLECTION		
Sample ID # *(you make this up, must also be on sample container)*		
Sampling Location *(wellhead/kitchen sink/etc.)*		
Sampling Street Address ❒ Same as Submitter Location		
City	State	ZIP
Comments:		

SUBMITTER		
Account #		
Submitter Name		
Submitter Street Address		
City	State	ZIP
Contact Name ❒ Same as Above		
Phone *(please print clearly)*	Fax	
Email *(please print clearly)*		

SAMPLE COLLECTION		
Collection Date	Collection Time ❒ AM ❒ PM	
Sample Collector Name *(please print clearly)*		
Sample Collector Signature		
Reason for Testing ❒ Routine ❒ Survey ❒ Replacement ❒ Retest ❒ Other		
Free Residual Chlorine *(if reported)*		
Temperature Upon Receipt (°C) & Thermometer Number Used		

BILLING		
Send Invoice To ❒ Same as Above		
Amount Paid $		
❒ Visa #: ❒ MC #:		Exp. Date
❒ Check #:	❒ Cash	❒ Fee Waived

SAMPLE SOURCE			
❒ Drinking water	❒ Pool/Spa water	❒ Creek/Stream/Lake water	❒ Other:
❒ Irrigation water	❒ Deionized water	❒ Dental water	

TEST ORDER	
❒ 8040 Total Coliforms/*E. coli*–Bacterial Presence/Absence–Drinking Water Quality (SM 9223 B Colilert)	
❒ 8350 Total Coliforms/*E. coli*, undiluted, Most Probable Number (MPN) (SM 9223 B Colilert QuantiTray)	
❒ 8025 Total Coliforms/*E. coli*, diluted, MPN (SM 9223 B-2016 Colilert Quantitray)	❒ 8045 Heterotrophic Plate Count–HPC (SM 9215 B)
❒ 8010 Enterococci, diluted, MPN (SM 9230 D-2013 Enterolert QuantiTray)	❒ Other *(specify)*:

CUSTODY TRANSFER					
Relinquished By	*Date*	*Time*	*Received By*	*Date*	*Time*
Relinquished By	*Date*	*Time*	*Received By*	*Date*	*Time*

Initial sample QA check: Container within expiration ❒ Container type acceptable for test request ❒ Volume check passed ❒

Requisition 200 Environmental Updated November 21, 2025

c. Requisition for tick submissions

SAN LUIS OBISPO COUNTY
PUBLIC HEALTH LABORATORY
Ph: 805-781-5507 FAX: 805-781-1023
www.sloPublicHealth.org/lab
2191 Johnson Avenue, San Luis Obispo, CA 93401
CLIA : 05D0695770

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CONTACT INFORMATION		
Name		
Street Address		
City	State	ZIP
Phone		

ACCOUNT INFORMATION		
Account **152511H**		
Submitter Name **SAN LUIS OBISPO COUNTY PUBLIC HEALTH DEPARTMENT**		
Street Address **2191 JOHNSON AVENUE**		
City **SAN LUIS OBISPO**	State **CA**	ZIP **93401**
Name of Contact **COUNTY OF SAN LUIS OBISPO PUBLIC HEALTH LABORATORY**		
Phone **805-781-5507**	FAX **805-781-1023**	

PATIENT INFORMATION (BITE)	
Name	
DOB	Sex

BILLING	
Amount Paid $	☐ Cash ☐ Check #

DATE REMOVED/COLLECTED	
Date	Time

TEST ORDER (ORDER CODE)
☐ Helminth & Arthropod (insect, spider, etc.) for Identification (4020)
☐ Tick for Identification (4015)
☐ Other (Specify):

DESCRIBE CONTACT

RECEIVED		
Received By	Date	Time

Tick Submittal Req 300 (6/7/2024)

III. Laboratory test information and collection instructions

a. Bacteriology test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Aeromonas-Plesiomonas culture (2310)	Culture and isolation of *Aeromonas* species from stool specimens	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	2 days	87046
Antibiotic susceptibility testing, urine isolate (2600)	Determination of susceptibility and resistance patterns for uropathogens isolated from culture	Urine	Urine collected in a sterile container, in Boritex Urine Preservative, or BD Vacutainer Urine Collection System	Sterile container: room temperature for 2 hours or refrigerated for 24 hours Boritex: room temperature for 72 hours	Susceptible	Daily	Prelim: 1 day Final: 3 days	87184
Bacteriology isolate identification, set-up (2085)	Culture procedure for miscellaneous bacteria to set-up identification	Bacterial isolate	Bacteria inoculated onto slant medium	Bacteria-specific; must be viable upon receipt	Non-pathogenic bacteria	Daily	3 days to ID or referral	87077

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Bacteriology primary culture (2025)	Culture and isolation of aerobic and anaerobic bacterial pathogens from primary specimens	Abscess or wound aspirate, biopsy material, swab of superficial wound, tissue sample, wound drainage fluid	Aspirates/drainages: fluid collected in a sterile container Biopsies: place in sterile tube with broth culture medium or saline Swabs: Collect into transport system with Stuart's or Amies medium Tissues: Collect in sterile vial with saline or anaerobe transport vial	Specimens must be transported to the laboratory within 48 hours of collection, 4°C to 25°C	No pathogen isolated	Daily	Prelim: 1 day Final: Pathogen-specific but typically 3 days for most aerobic pathogens (then referral if needed)	87070
Campylobacter culture (2240)	Culture and isolation of *Campylobacter* species from stool specimens	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	4 days	87046
Carba-R assay (2350)	Detection of beta-lactamase genes associated with carbapenem-non-susceptibility—IMP, VIM, NDM, KPC, and OXA-48—using the GeneXpert instrument	Bacterial isolates (Enterobacterales, *A. baumanii*, or *P. aeruginosa*), rectal swabs, or perirectal swabs	Isolates: inoculated onto slant medium Swabs: collected into Cepheid collection device	Isolates: ambient or refrigerated but must be viable for subculturing Swabs: 15–28 °C for up to 5 days	No beta-lactamase genes detected	Daily	1 day	87150

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
E. coli shiga toxin-producing culture (2250)	Culture and isolation of shiga toxin-producing *E. coli* from stool specimens	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No shiga toxins detected	Daily	3 days then referral if positive	87046
E. coli shiga toxin-producing isolate, confirmation (2080)	Shiga toxin characterization and serotyping of shiga toxin-producing *E. coli*	Isolate, GN broth, or MacConkey broth	GN or MacConkey broth inoculated with stool and incubated for 16–24 hours	Isolate: ambient, must be viable upon receipt Broth culture: refrigerated, must exhibit growth upon receipt (recommended within 14 days)	No shiga toxins detected	Daily	2 days then referral if positive	87070
Gram stain (2035)	Classification of bacteria based on form, size, and Gram reaction	Pure culture or specimen	Specimen dependent	Specimen dependent	No bacteria seen	Daily	1 day	87205
MALDI-TOF MS bacterial ID (2460, 2470)	Identification of bacterial isolates using the mass and intensity distribution of protein profile from a Bruker MALDI Biotyper	Bacterial isolate	Bacteria inoculated onto slant medium	Bacteria-specific; must be viable upon receipt	Not applicable	Daily	1 day	87077

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Neisseria gonorrhoeae culture (2050)	Culture and isolation of *Neisseria gonorrhoeae* from primary specimens	Swab of urogenital, cervical, rectal, or oropharyngeal site	Dacron or rayon swab of site placed in Amies transport medium	Ambient for up to 48 hours	No pathogen isolated	Daily	3 days	87081
Neisseria gonorrhoeae culture confirmation (2040)	Identification of *Neisseria gonorrhoeae*	Bacterial isolate	Bacteria inoculated onto slant medium	Bacterium must be viable upon receipt	No pathogen identified	Daily	2 days	87077
Salmonella culture (2220)	Culture and isolation of *Salmonella* from stool	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	4 days	87045
Shiga toxin EIA (2290)	Detection of shiga toxin 1 and 2 in stool specimens or broth culture	Stool	Stool collected in a sterile container, Cary-Blair media, or Amies transport media	Unpreserved stool or stool in transport media (direct method): refrigerated or frozen for up to 14 days Unpreserved stool (broth method): frozen for up to 14 days Stool in transport media (broth method): refrigerated for up to 5 days	No shiga toxins detected	Daily	1 day	87427

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Shigella culture (2230)	Culture and isolation of *Shigella* from stool	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	4 days	87045
Stool culture isolate identification (2280)	Set-up procedure for identifying a bacterium isolated from stool	Bacterial isolate	Bacteria inoculated onto slant medium	Bacterium must be viable upon receipt	Non-pathogenic bacterium	Daily	2 days	87045
Streptococcus culture (2015)	Culture and isolation of beta-hemolytic streptococci from swab specimens	Rectal swab, throat swab, or vaginal swab	Swab collected into Amies transport medium	Ambient for up to 24 hours	Negative	Daily	1 day	87081
Urine culture with colony count (2065)	Isolation and identification of uropathogens from urine specimens	Urine	Urine collected in a sterile container, in Boritex Urine Preservative, or BD Vacutainer Urine Collection System	Sterile container: room temperature for 2 hours or refrigerated for 24 hours Boritex: room temperature for 72 hours BD Vacutainer: room temperature for 48 hours	No growth in 24 hours	Daily	Prelim: 1 day Final: 3 days	87086

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Vibrio culture (2260)	Culture and isolation of *Vibrio* species from stool	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	3 days	87046
Yersinia enterocolitica culture (2270)	Culture, isolation, and identification of *Y. enterocolitica* from stool	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	2 days	87046
Bacteriology panels								
Gastrointestinal PCR panel (6500)	Biofire PCR panel that detects 22 agents (viruses, bacteria, and parasites) that cause diarrhea	Stool	Stool in Cary-Blair transport medium (preferred), stool in a sterile container,	Cary-Blair: refrigerated to room temperature for up to 4 days Sterile container: ambient for 2 hours	No pathogens detected	Daily	1 day	0097U
Stool culture, comprehensive (3000)	Culture and isolation of *Salmonella*, *Shigella*, *Campylobacter*, Shiga toxin-producing *E. coli*, *Vibrio* species, *Aeromonas* species, and *Plesiomonas shigelloides*	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	4 days	87045, 87046

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Stool culture, standard (2200)	Culture and isolation of *Salmonella*, *Shigella*, *Campylobacter*, and Shiga toxin-producing *E. coli*	Stool	Stool collected in Cary-Blair or Amies transport media	Refrigerated to room temperature (2–25°C): 4 days	No pathogen isolated	Daily	4 days	87045, 87046

TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

b. Bacteriology specimen collection

1. Primary culture

a. Specimens include abscess or wound aspirate, biopsy material, swab of superficial wound, tissue sample, wound drainage fluid

Specimen

Abscess or wound aspirate in a sterile container

1. Disinfect the skin surface with 70% alcohol. Allow it to dry.
2. Aspirate specimen directly into a syringe. Remove air from syringe.
3. Aseptically transfer aspirate into a sterile container.
4. If the specimen must be transported in the syringe, replace the needle with a sterile Leur cap.
5. If unable to aspirate and swab is used, pass a swab deep into the lesion and firmly sample the lesion's advancing edge. Place swab into Amies transport medium for aerobes.

Biopsy or tissue material in a sterile container

1. Place biopsy material in a sterile container that can be sealed.
2. To prevent tissue from drying out, add several drops of sterile saline to keep moist if necessary.
3. Seal sterile container and place in a biohazard bag.

Swab in Amies transport medium

1. If swabs must be used, collect two swabs at the anatomic site of infection. One swab will be used for culture and one for Gram staining.
2. Place the swab in a tube of Amies transport medium.
3. Record on test requisition the anatomic site swabbed and suspected infection.

Storage & Transport

Temperature: Room temperature (4–25 °C / 40–77 °F)

Maximum Holding Time: 48 hours (time from collection to test set-up in laboratory)

2. Carba-R assay (rectal and perirectal swabs)

Specimen

Paired rectal swabs

1. The only swab that can be used is a Copan dual swab in Stuart medium.
2. Carefully insert both swab tips approximately 1 cm beyond the anal sphincter and rotate
3. See figure below for examples of acceptable swabs. Note, the swab cannot be overly contaminated with stool.

Paired perirectal swabs

1. The only swab that can be used is a Copan dual swab in Stuart medium.
2. Carefully insert both swab tips no more than 1 cm into the anal opening before the anal sphincter and rotate gently.
3. See figure below for examples of acceptable swabs. Note, the swab cannot be overly contaminated with stool.

Figure. Examples of Acceptable Swab Specimens for Xpert Carba-R Testing.

Storage & Transport

Temperature: Room temperature (15–28 °C / 59–82 °F)

Maximum Holding Time: 5 days (time from collection to test set-up in laboratory)

3. *Neisseria gonorrhoeae* culture

Specimen

Swab in Amies transport medium

1. Endocervical (preferred site for females)
    a. Specimen collection should be done with a sterile Dacron swab.
    b. Rotate swab against the wall of the endocervical canal several times for 20-30 seconds and withdraw without touching the vaginal surface.
    c. Place the swab in a tube of Amies transport medium.
    d. Speculum should be lubricated with water only.
2. Urethral (preferred site for males)
    a. Delay obtaining specimen until 2 hours after patient has last voided.
    b. Gently insert the urogenital swab into the urethra (women 1-2 cm, men 2-4 cm). Rotate the swab in one direction for at least one revolution for a minimum of 10 seconds.
    c. Place the swab in a tube of Amies transport medium.
    d. Alternatively, if a pus exudate can be expressed from the urethra to the tip of the penis, roll the swab in the exudate; place the swab in a tube of AMIES TRANSPORT MEDIUM.
3. Oropharynx (throat)
    a. Gently use tongue depressor to look for areas of inflammation (redness) and exudate (pus).
    b. Carefully, but firmly, guide the swab over:
        i. Several areas of inflammation or pus
        ii. The tonsils (or tonsillar crypts if tonsils have been removed)
        iii. Posterior pharynx (back of throat)
    c. Place the swab in Amies transport medium.
4. Rectal
    a. Insert sterile swab approximately 1-1.5 inches in the anal canal. Move swab from side to side in the anal canal to sample crypts.
    b. Allow swab to remain for 10-30 seconds for absorption of organisms onto the swab.
    c. Place the swab in a tube of Amies transport medium.

Storage & Transport

Temperature: Room temperature (15–30 °C / 59–86 °F)

Maximum Holding Time: 48 hours (time from collection to test set-up in laboratory)

4. ***Streptococcus* primary culture**

Specimen

Throat swab

1. Depress tongue with a tongue depressor.
2. Sample the posterior pharynx, tonsils, and inflamed areas with a sterile swab.
3. Since many streptococcal species lose viability quickly, it is best to place swabs in an appropriate moist transport medium, such as Amies transport medium. If transport time is below 1 to 2 hours, a special transport system is not necessary.

Vaginal swab (for group B streptococcal screening)

1. Insert the swab 2 cm into the lower vagina (vaginal introitus).
2. Move the swab from side to side, or rotate the swab at each collection site, allowing 10 to 30 seconds for absorption of organisms into the swab material.
3. Place the swab in Amies transport medium.

Rectal swab (for group B streptococcal screening)

1. Insert sterile swab approximately 1-1.5 inches in the anal canal (through the anal sphincter). Move swab from side to side in the anal canal to sample crypts.
2. Allow swab to remain for 10 to 30 seconds for absorption of organisms into the swab material.
3. Place the swab in Amies transport medium.

Storage & Transport

Temperature: Room temperature (15–30 °C/59–86 °F)
Maximum Holding Time: 24 hours (time from collection to test set-up) for swabs in Amies transport medium

5. Stool culture

Specimen

Stool in Cary Blair medium

For the best results, stool specimens should be obtained during the acute phase of illness.

1. Lift the toilet seat and place the white stool collection device at the rear of the toilet bowl; lower the seat.
2. Pass the stool into the white stool collection device.
3. Collect stool from areas that appear bloody, slimy, or watery. If firm, collect from both ends and middle.
    a. Using the scoop built into the cap, transfer enough stool to the vial to reach the red fill line, do not overfill.
    b. Mix the vial contents with the scoop; carefully tighten the cap and shake until contents are well mixed.
    c. Label the vial (name, collection date/time) and place inside the inner specimen bag and seal tightly.

Stool collection device

4. Place the bagged yellow vial inside the zippered portion of the biohazard specimen bag and seal tightly.
5. Fill out the requisition form completely. Fold it in half once and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
6. Transport at room temperature to the laboratory within 4 days of collection.

Storage & Transport

Temperature: Refrigerated to room temperature (2–25 °C/36–77 °F) for Cary Blair Medium

Maximum Holding Time: 4 days (time from collection to test set-up) for Cary Blair Medium

6. Urine culture

Specimen

Urine in a Boritex Cup

1. Label the Boritex Cup with the patient's information.
2. Have the patient submit a clean-catch midstream urine sample in the Boritex Urine Cup (see additional instructions below).
3. Leave the white tablet in the cup. DO NOT INGEST. DO NOT TOUCH.
4. Place the Boritex Urine Culture Cup inside the biohazard specimen bag and seal tightly.
5. Fill out the requisition form completely. Fold it in half once (no staples please) and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
6. Transport to the laboratory within 72 hours of collection.

Boritex Urine Culture Cup

Patient Instructions

Note: it is very important that these instructions are followed closely to prevent the urine sample from being contaminated with normal skin bacteria, which may result in the sample being rejected.

1. Ensure the Urine Collection Cup is labeled with your name and date of birth.
2. Wash your hands thoroughly with warm soapy water and dry well.
3. Spread a clean paper towel on a counter or surface you can reach from the toilet.
4. Open the towelette packets and place them on the towel.
5. Take the lid off the Urine Collection Cup. Put the lid (inside facing down) on the paper towel next to the towelettes. Do not touch the inside of the cup or lid.
6. Leave the white tablet in the cup. DO NOT INGEST. DO NOT TOUCH.
7. Cleanse the skin as follows:

   Male Patients

   a. Wash your entire penis with the first wipe. Throw the towelette away.
   b. Pull back on the fold of skin around the tip of your penis (if present) and use the second towelette to cleanse the head of the penis from the center out. Throw the towelette away.
   c. Use the third towelette to cleanse the head of the penis from the center out; throw away.

   Female Patients

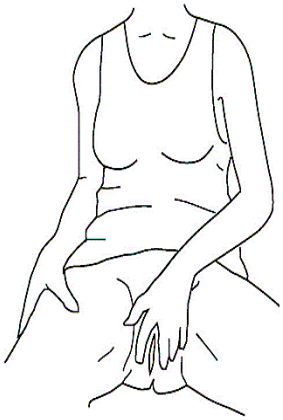
   1. Sit on the toilet and spread your legs apart. Use two fingers on one hand to spread open your labia (the folds of skin on each side of your vagina). Continue

holding the labia open until you get the urine sample. The goal is to collect the urine directly into the container without coming in contact with surrounding skin.

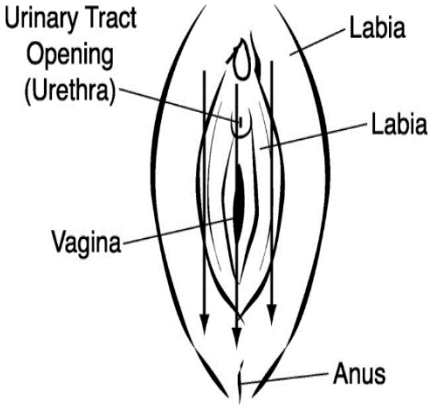
2. With your other hand, use the first towelette to wipe the left side of the inner labial folds from front to back in one stroke. Throw the towelette away.
3. Use the second towelette to wipe the right side of the inner labial folds from front to back in one stroke. Throw the towelette away.
4. Use the third towelette to clean in the middle over the opening to your urethra. This is where your urine comes out, and it is just above the opening to your vagina. Throw the towelette away.

8. Urinate the first part of the stream into the toilet and then stop the flow.
9. Hold the urine collection cup a few inches from your urethra.
10. Urinate into the cup until it is about half full and then stop the flow.
11. Finish urinating in the toilet.
12. Securely screw the lid onto the container, taking care not to touch the inside of the cup or lid. Rinse and dry the outside of the container.
13. Wash your hands thoroughly with warm soapy water and dry.

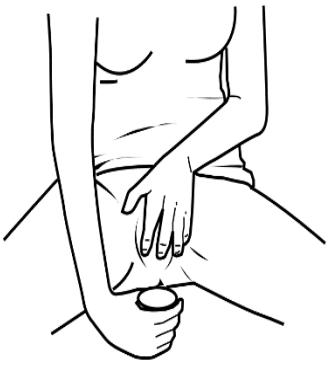
Sterile Boritex Urine Collection Cup



Separate Labial Folds



Wipe with Towlettes



Collect Urine

Storage & Transport

Temperature: Room temperature (15–25 °C/59–77 °F)
Maximum Holding Time: 72 hours (time from collection to test set-up).

Note: the Boritex Urine Culture Cup is the preferred specimen container and can be transported at room temperature within 72 hours. If the urine sample is submitted directly in a sterile container, it must be transported refrigerated and ASAP, but within 24 hours.

c. Molecular test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Chlamydia NAAT (2750)	Qualitative detection of *Chlamydia trachomatis* ribosomal RNA by Hologic Panther	Urine, endocervical swab, rectal swab, throat swab, urethral swab, vaginal swab	Urine: Aptima urine container Endocervical, urethral: Aptima unisex swab Rectal, throat, vaginal: Aptima multitest swab	Room temp. or refrigerated (2–30°C): 30 days for urine, 60 days for swabs	Negative	Daily	1 day	87491
Gonorrhea NAAT (2770)	Qualitative detection of *Neisseria gonorrhoeae* ribosomal RNA by Hologic Panther	Urine, endocervical swab, rectal swab, throat swab, urethral swab, vaginal swab	Urine: Aptima urine container Endocervical, urethral: Aptima unisex swab Rectal, throat, vaginal: Aptima multitest swab	Room temp. or refrigerated (2–30°C): 30 days for urine, 60 days for swabs	Negative	Daily	1 day	87591
Herpes Simplex Virus NAAT (6840)	Qualitative detection of HSV-1 and HSV-2 DNA by the Quidel Solana	Cutaneous and mucocutaneous lesions	Swab of lesion in VTM or UTM	Refrigerated (2–8°C) or frozen: ≤7 days	Negative	Daily	1 day	87798
Influenza/SARS-CoV-2 NAAT (51000)	CDC Flu SC2 multiplex assay for qualitative detection of Influenza A, Influenza B, and SARS-CoV-2 RNA by PCR	Swabs: NP, throat, nasal mid-turbinate swab, anterior nasal Other: BAL, nasal wash/aspirate, pleural fluid, sputum, tracheal aspirate	Swabs: VTM Fluids, aspirates: Sterile container	Refrigerated (2–8°C): ≤72 hours Frozen (-70°C): >72 hours	Negative	Daily	1 day	87636

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Influenza virus RT-PCR (51005)	CDC Human Influenza Virus RT-PCR Diagnostic Panel for Influenza A/B typing, subtyping, and lineage genotyping	Swabs: NP, throat, nasal mid-turbinate swab, anterior nasal Other: BAL, nasal wash/aspirate, pleural fluid, tracheal aspirate	Swabs: VTM Fluids, aspirates: Sterile container	Refrigerated (2–8°C): ≤72 hours Frozen (-70°C): >72 hours	Negative	Mon, Wed, Fri	2 days	87501
Measles virus PCR (6180)	Qualitative detection of Measles virus RNA by RT-PCR	Throat swab, NP swab, NP aspirate, urine	Swabs: VTM Urine, aspirates: Sterile container	Swabs, aspirates: Refrigerated (2–8°C) for ≤72 hours; frozen (-70°C) for >72 hours Urine: Refrigerated (2–8°C) for ≤24 hours	Negative	Daily	1 day	87798
M. tuberculosis amplification, MTB-RIF (3530)	Qualitative detection of *Mycobacterium tuberculosis* complex DNA and rifampin resistance in respiratory specimens by Xpert MTB/RIF assay	Sputum, bronchial washings/aspirate	Sputum in a sterile container (≥5 ml); bronchial washings in a sterile container (≥1 ml)	Refrigerated (2–8°C): ≤72 hours	Negative	Daily	1 day	87564
Mumps Virus PCR (6170)	Qualitative detection of Mumps virus RNA by RT-PCR	Tested inhouse: Buccal swab Referred: Throat swab, urine	Swabs: VTM Urine: Sterile container	Swabs: Refrigerated (2–8°C) for ≤72 hours; frozen (-70°C) for >72 hours Urine: Refrigerated (2–8°C) for ≤24 hours	Negative	Daily	1 day	87798

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Mycoplasma genitalium NAAT (2870)	Qualitative detection of *Mycoplasma genitalium* ribosomal RNA by Hologic Panther	Urine, endocervical swab, urethral swab, vaginal swab	Urine: Aptima urine container Endocervical, urethral: Aptima unisex swab Vaginal: Aptima multitest swab	Room temp. or refrigerated (2–30°C): 30 days for urine, 60 days for swabs	Negative	3× weekly	2 days	87563
Norovirus RT-PCR (6100)	Qualitative detection of Norovirus genogroup I and II RNA from stool specimens by PCR	Stool	Stool collected in Cary-Blair Medium or in a sterile container	Cary-Blair: room temperature (15–25°C) for up to 4 days Raw stool: Refrigerated (2–8°C) for up to 3 weeks	Negative	Daily	1 day	87798
Poxvirus PCR (BTC05300)	Qualitative detection of orthopoxvirus and non-variola orthopoxvirus DNA from lesions by PCR	Skin lesion	Dry swabs (×2) of a single lesion in a sterile container	Refrigerated (2–8°C): 7 days	Negative	Daily	1 day	87798
Rabies DFA (6000)	Detection of rabies virus in brain tissue using a direct fluorescent antibody technique	Brain tissue	Intact head, complete carcass, or brain from a suspect rabid animal	Refrigerated (2–8°C): 72 hours	Negative	Daily for high-priority; weekly for low-priority	1 day for high-priority	N/A

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
SARS-CoV-2/Flu/RSV NAAT (52000)	Multiplexed PCR for qualitative detection of RNA from SARS-CoV-2, influenza A, influenza B, and RSV by Xpert Xpress	NP swab, anterior nasal swab, nasal wash/aspirate	Swabs and wash/aspirate: VTM	Refrigerated (2–8°C): 7 days Room temp. (15–30°C): 2 days	Negative	Daily	1 day	87637
SARS-CoV-2 NAAT (6860)	Qualitative detection of SARS-CoV-2 RNA by transcription-mediated amplification by Hologic Panther	Swabs: NP, nasal, mid-turbinate, throat Aspirate: NP, nasal	Swabs and aspirate: VTM	Refrigerated (2–8°C): 96 hours	Negative	Daily	1 day	87635
Trichomonas NAAT (2850)	Qualitative detection of *Trichomonas vaginalis* ribosomal RNA by Hologic Panther	Urine, endocervical swab, vaginal swab	Urine: Aptima urine container Endocervical: Aptima unisex swab Vaginal: Aptima multitest swab	Room temp. or refrigerated (2–30°C): 30 days for urine, 60 days for swabs	Negative	3× weekly	2 days	87661
Varicella-Zoster Virus NAAT (6900)	Qualitative detection of varicella-zoster virus (chickenpox) DNA by isothermal amplification with the Quidel Solana	Swabs of vesicular and non-vesicular lesions	Swabs: VTM	Refrigerated (2–8°C) or frozen (–20°C): 7 days	Negative	Daily	1 day	87798
Molecular panels								

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Gastrointestinal PCR panel (6500)	Biofire PCR panel that detects 22 agents (viruses, bacteria, and parasites) that cause diarrhea	Stool	Stool in Cary-Blair transport medium (preferred), stool in a sterile container	Cary-Blair: refrigerated to room temperature for up to 4 days Sterile container: ambient for 2 hours	No pathogens detected	Daily	1 day	87507
Respiratory Pathogen PCR panel (6310)	Biofire PCR panel that detects 19 agents (viruses and bacteria) that cause respiratory illness	NP swab	NP swab in VTM	Refrigerated (2–8°C): ≤72 hours	No pathogens detected	Daily	1 day	87633

BAL, bronchial alveolar lavage, NP, nasopharyngeal; PCR, polymerase chain reaction; RSV, respiratory syncytial virus; RT-PCR, reverse-transcription polymerase chain reaction; TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing); UTM, universal transport medium; VTM, viral transport medium.

d. Molecular specimen collection

1. Animals for rabies testing

Specimens

Whole animal (if no larger than a racoon)

i. Triple bag the whole animal, securing each bag individually with tape or equivalent.
ii. Place the completed requisition in a separate plastic bag—do not place the requisition in the bag containing the animal carcass.
iii. Refrigerate the specimens (no more than 3 days); transport them to the public health laboratory as soon as possible.

Animal head (for larger animals)

1. When removing the head be aware that the spinal cord near the base of the head is an important section for testing rabies.
2. For large heads triple bag as for whole animals.
3. For small heads or small animals (i.e., bats) place the head or carcass in a plastic or Ziplock bag, and then place in a secondary plastic bag and then in a third plastic bag.
4. Refrigerate the specimens (no more than 3 days); transport them to the public health laboratory as soon as possible.
5. DO NOT FREEZE THE ANIMAL.

Transport

1. Place bagged animal in a cooler or Styrofoam container with several ice packs for transport.
2. Place filled out requisition in a yellow leak-proof Biohazard bag and put it in the cooler for transport.
3. If there is more than one animal of the same species be sure to provide distinct identification for each one separately on separate requisitions.

2. Chlamydia, *Gonorrhea*, *Trichomonas*, and *Mycoplasma genitalium* NAAT testing

Specimen Type	Chlamydia	Gonorrhea	Trichomonas	M. genitalium
Urine (female/male)	✓	✓	✓	✓
Unisex Swab - Endocervical (female)	✓	✓	✓	✓
Unisex Swab - Urethral (male)	✓	✓		✓
Multitest Swab - Vaginal (female)	✓	✓	✓	✓
Multitest Swab - Throat (female/male)	✓	✓		
Multitest Swab - Rectal (female/male)	✓	✓		

Specimens

Urine – Urine transport tube

Patient Instructions

1. Do not urinate for at least one hour prior to collection.
2. Do not cleanse genitals prior to collection.
3. Collect only the first, most concentrated part of the urine stream (about 20 mL to 30 mL) into a collection cup that is free of any preservatives.

Clinic Staff Instructions

1. Using the disposable pipette provided, transfer 2 mL of urine into the transport tube, aiming for the middle of the fill area between the two black arrows.
   a. If the volume is outside of the acceptable range indicated with black arrows, the specimen **will be rejected**. If urine is under the line, add more. If urine is over the line, discard and replace it with a new Aptima urine transport tube.
   b. Urine specimens must be transferred into the transport tube within 24 hours of collection; however, we find within 2 hours to be optimal.
2. Tightly screw the cap onto the tube.

Endocervical swab – Unisex swab

1. Remove excess mucus from the cervical os and surrounding mucosa using the cleaning swab (white shaft swab). Discard this swab. If excess mucus remains, an additional large-tipped swab (not provided) may be used for cleaning.
2. Insert the Unisex Swab (blue shaft swab) into the endocervical canal.
3. Gently rotate the swab clockwise for 10 to 30 seconds in the endocervical canal.

Unisex Swab

4. Withdraw the swab carefully; avoid any contact with the vaginal mucosa.
5. Remove the tube cap and immediately place the swab into the transport tube.
6. Carefully break the swab shaft against the side of the tube at the scoreline and discard the top portion of the swab shaft; use care to avoid splashing of contents.
7. Re-cap the swab specimen transport tube tightly.

Urethral (Male) swab – Unisex swab

1. The patient should not have urinated for at least 1 hour prior to sample collection.
2. Insert the Unisex Swab (blue shaft swab) 2 to 4 cm into the urethra.
3. Gently rotate the swab clockwise for 2 to 3 seconds in the urethra; withdraw the swab carefully.
4. Remove the tube cap and immediately place the specimen collection swab into the transport tube.
5. Carefully break the swab shaft against the side of the tube at the scoreline and discard the top portion of the swab shaft; use care to avoid splashing of contents.
6. Re-cap the swab specimen transport tube tightly.

Unisex Swab

Vaginal swab – Multitest swab

Note: Vaginal swabs can be collected by the clinician or by the patient. Patient-collected vaginal swab specimens are an option for screening women when a pelvic exam is not otherwise indicated. The vaginal swab specimen collection kit is not for home use.

1. Partially peel open the swab package. Remove the swab. Do not touch the soft tip or lay the swab down. If the soft tip is touched, the swab is laid down, or the swab is dropped, use a new Aptima Multitest Swab Specimen Collection Kit.
2. Hold the swab, placing your thumb and forefinger in the middle of the swab shaft covering the score line. Do not hold the swab shaft below the score line.
3. Carefully insert the swab into the vagina about 2 inches (5 cm) and gently rotate the swab for 10 to 30 seconds. Make sure the swab touches the walls of the vagina so that moisture is absorbed by the swab and then withdraw the swab without touching the skin.
4. While holding the swab in the same hand, unscrew the cap from the tube. Do not spill the contents of the tube. If the contents of the tube are spilled, use a new Aptima Multitest Swab Specimen Collection Kit.
5. Immediately place the swab into the transport tube so that the score line is at the top of the tube.
6. Carefully break the swab shaft at the score line against the side of the tube.
7. Immediately discard the top portion of the swab shaft.
8. Tightly screw the cap onto the tube.

Multitest Swab

Throat swab – Multitest swab

1. Pull the swab out of the package. Do not touch the soft tip or lay the swab down.
2. Have patient tilt head back, breathe deeply, open mouth wide and say "Ah". This serves to lift the uvula and aids in reducing the gag reflex.
3. Gently use tongue depressor to look for areas of inflammation (redness) and exudate (pus).
4. Carefully, but firmly, guide the Multitest Swab over:
   a. Several areas of inflammation or pus
   b. The tonsils (or tonsillar crypts if tonsils have been removed)
   c. Posterior pharynx (back of throat)
5. Withdraw the swab carefully. Every effort should be made to avoid touching the swabs to the tongue, teeth, roof of the mouth or the inside of the cheeks at any time.
6. Remove the tube cap and immediately place the specimen collection swab into the transport tube.
7. Carefully break the swab shaft against the side of the tube at the scoreline and discard the top portion of the swab shaft; use care to avoid splashing of contents.
8. Re-cap the swab specimen transport tube tightly.

Multitest Swab

Rectal swab - Multitest swab

1. Pull the swab out of the package. Do not touch the soft tip or lay the swab down.
2. Insert the Aptima Multitest Swab approximately 3-5 cm into the rectum.
3. Gently rotate the swab clockwise for 2 to 3 seconds against the rectal wall; withdraw the swab carefully. Swabs that are grossly contaminated with feces should be discarded and the collection repeated.
4. Remove the tube cap and immediately place the specimen collection swab into the transport tube.
5. Carefully break the swab shaft against the side of the tube at the scoreline and discard the top portion of the swab shaft; use care to avoid splashing of contents.
6. Re-cap the swab specimen transport tube tightly.

Multitest Swab

Storage & Transport

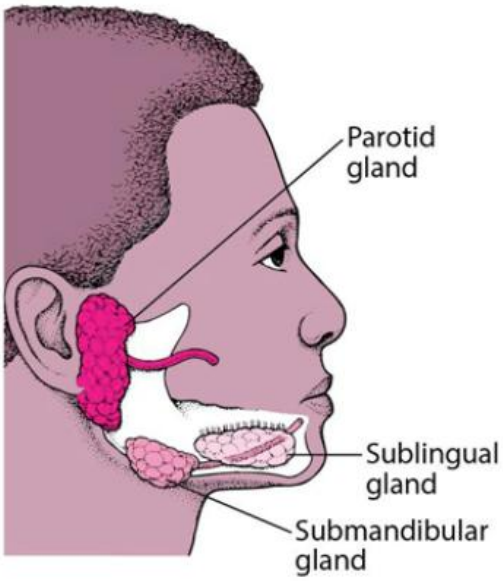
Temperature: Refrigerated or room temperature (2 °C – 30 °C / 36 °F – 86 °F)
Maximum Holding Time: 30 days for urine; 60 days for swabs (time from collection to test set-up in lab)

3. Mumps PCR: Buccal swab

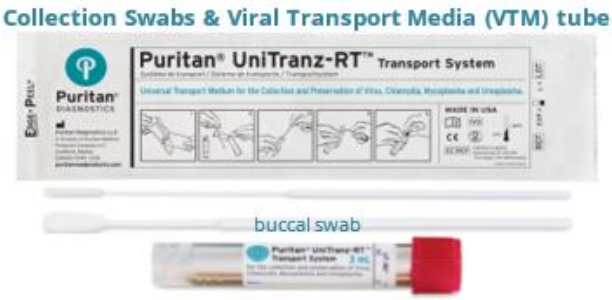
Specimen

Buccal swab in VTM

1. Collect a buccal swab sample as soon as mumps disease is suspected. RT-PCR has the greatest diagnostic sensitivity when samples collected at first contact with a suspected case.
    a. To obtain a buccal or oral swab specimen:
        i. Massage the parotid glands on each side of the face for 30 seconds.
        ii. Next, swab the area around the parotid gland duct (between the cheek and gum from the upper to lower molars), while rotating the swab. Swab areas on both insides of the mouth.
        iii. A Dacron or other synthetic swab is required. Cotton swabs, or wood shafted swabs are unacceptable since they may contain substances that are inhibitory to enzymes used in RT-PCR.



    a. Swabs should be placed in 2 to 3 ml of standard viral transport medium (VTM). Swirl the swab VTM thoroughly and then ream the swab around the rim of the tube to retain cells and fluid in the tube. The swab can be broken off and left in the tube or discarded.



Storage & Transport

Temperature: Refrigerated temperature (2–8 °C/36–46 °F)

Maximum Holding Time: 72 hours refrigerated (time from collection to test set-up). If the specimen cannot be transported to the laboratory within 24 hours, freeze the specimen at the lowest temperature available. Frozen samples should be shipped on dry ice.

4. Poxvirus PCR: Lesion swab

Specimen

Lesion swab – dry swab in duplicate

1. Personal protective equipment (PPE) should be worn when collecting a specimen from a person with suspected or confirmed mpox. Recommended PPE consists of a gown, gloves, eye protection (e.g., face shield), and a NIOSH-approved particulate respirator with an N95 filter or higher.
2. Do not clean the lesion before sample collection. Also, do not apply a numbing cream or topical agent prior to swabbing as this may interfere with testing results.
3. More than one lesion should be sampled, preferably 2 to 3 total lesions (for 2 to 3 total specimens) if present on different body sites.
    a. Use a sterile, dry, synthetic swab (e.g., nylon, polyester or Dacron swab) to sample a lesion.
    b. **Vigorously** swab or brush each lesion with a sterile dry swab.
    c. Break off swab and place it into a sterile tube or container.
        a. Label the tube or container with the patient's full name, date of collection, and specimen source.
        b. For swabs stored dry (preferred): The same lesion should be sampled with two separate swabs. Place each swab in its own sterile container, then put both containers into a single specimen biohazard bag.
        c. For swabs stored wet: A lesion can be sampled with a single swab. Place the swab into a collection vial with 2–3 ml of VTM and put the vial into a specimen biohazard bag.
    d. Fill out the San Luis Obispo Public Health Laboratory Requisition completely.
        a. Indicate on requisition that you are requesting **Poxvirus testing**.
        b. Place the completed requisition in the pocket (not inside) of the specimen biohazard bag.
4. **Note: If testing is needed for other viral causes of rash, separate collection is required.** Preferred specimen types by virus are as follows:
    a. Varicella-Zoster Virus and Herpes Simplex Viruses: Swab specimens from cutaneous and mucocutaneous lesions in VTM or universal transport medium (UTM).
    b. Enterovirus: Nasopharyngeal swab in VTM.

Storage & Transport

1. Refrigerate (2–8°C) dry swabs within an hour after collection. Transport at refrigerated temperature (wet ice) within 7 days. If specimens are to be held longer than 7 days, freeze (-20°C or lower) within an hour of collection and ship on dry ice.
2. Clinical specimens should be shipped in Category B packaging.

5. Respiratory testing: Bronchial alveolar lavage or tracheal aspirate

Specimen

Bronchial alveolar lavage or tracheal aspirate in a sterile container

1. Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.
2. Due to the increased technical skill and equipment needs, collection of specimens other than sputum from the lower respiratory tract may be limited to patients presenting with more severe disease, including people admitted to the hospital and/or fatal cases.

Storage & Transport

Note: Storage and transport conditions depend on the type of testing performed. The most common conditions are described below. However, refer to the test information for exact conditions.

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)

6. Respiratory testing: Nasopharyngeal aspirate

Specimen

Nasopharyngeal aspirate in VTM

1. Attach catheter to suction apparatus.
2. Tilt patient's head back 70 degrees.
3. Instill 1 mL-1.5 mL of non-bacteriostatic saline (pH 7.0) into one nostril.
4. Insert the tubing into the nostril parallel to the palate (not upwards). The catheter should reach a depth equal to distance from nostrils to outer opening of ear.
5. Begin gentle suction/aspiration and remove catheter while rotating it gently.

a. Place specimen in a collection container with 2–3 ml of VTM.

Storage & Transport

Note: Storage and transport conditions depend on the type of testing performed. The most common conditions are described below. However, refer to the test information for exact conditions.

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

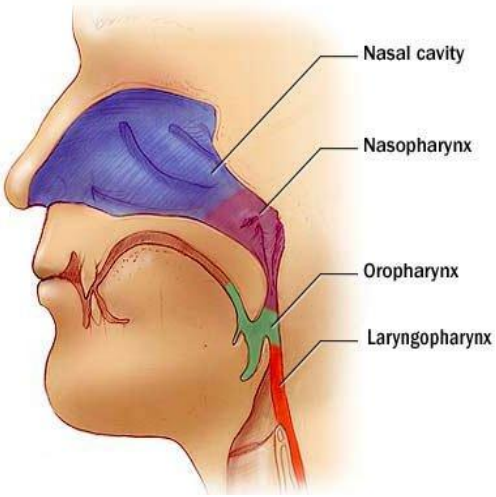
Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)

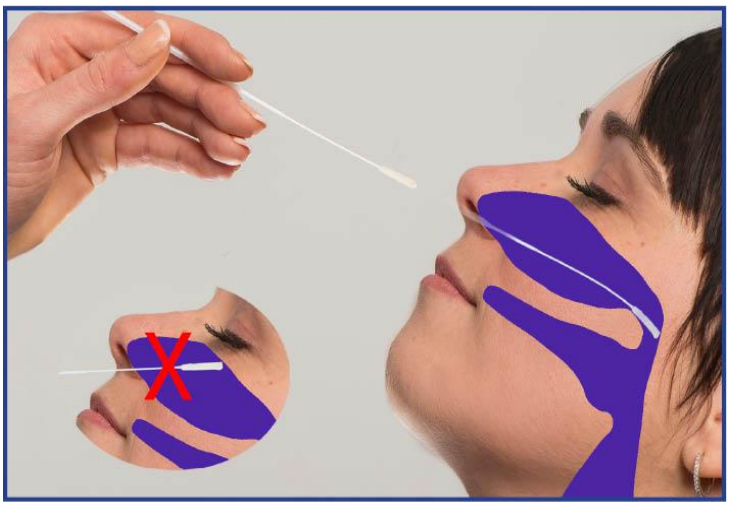
7. Respiratory testing: Nasopharyngeal (NP) swab

Specimen

Nasopharyngeal swab

1. Collect respiratory specimen during acute phase of illness.
    a. Ask the patient to blow their nose to clear their nasal passage and tilt the patient's head backwards.
    b. Swiftly insert the small swab into one nostril straight back (not upwards) at a depth equal to distance from nostrils to outer opening of the ear (see image on backside of page).
    c. Firmly rotate the swab up to 5 times and hold in place for 5-10 seconds to collect epithelial cells.
    d. Repeat with the other nostril using the same swab.
2. Snap the swab at the scored breakpoint line; place swab into VTM tube; close the tube tightly.
3. Label the tube with the patient's name, date of birth, and the date/time of collection.
4. Place the collection tube inside the zippered portion of the biohazard specimen bag and seal tightly.
5. Fill out the requisition form completely. Fold it in half once (no staples please) and place the paperwork in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).





Storage & Transport

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)

8. Respiratory specimen: throat swab

Specimen

Throat swab in VTM

1. Throat swabs should be taken with the aid of a tongue depressor.
2. Carefully insert swab into the posterior pharynx and tonsillar areas.
3. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the buccal mucosa, tongue, teeth, and gums.
4. Place swab, tip first, into 2–3 ml of VTM.

Collection Swabs & Viral Transport Media (VTM)

Storage & Transport

Note: Storage and transport conditions depend on the type of testing performed. The most common conditions are described below. However, refer to the test information for exact conditions.

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)

9. Stool collection: GP panel and norovirus testing

Yellow vial of Cary Blair Medium

Specimen

Stool in Cary Blair medium

For the best results, stool specimens should be obtained during the acute phase of illness.

1. Lift the toilet seat and place the white stool collection device at the rear of the toilet bowl; lower the seat.
2. Pass the stool into the white stool collection device.
3. Collect stool from areas that appear bloody, slimy, or watery. If firm, collect from both ends and middle.
    a. Using the scoop built into the cap, transfer enough stool to the vial to reach the red fill line, do not overfill.
    b. Mix the vial contents with the scoop; carefully tighten the cap and shake until contents are well mixed.
    c. Label the vial (name, collection date/time) and place inside the inner specimen bag and seal tightly.

Stool collection device

4. Place the bagged yellow vial inside the zippered portion of the biohazard specimen bag and seal tightly.
5. Fill out the requisition form completely. Fold it in half once and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
6. Transport at room temperature to the laboratory within 4 days of collection.

Storage & Transport

Temperature: Room temperature (2–25 °C/36–77 °F) for Cary Blair Medium

Maximum Holding Time: 4 days (time from collection to test set-up) for Cary Blair Medium

10. Stool collection: Norovirus testing

Specimen

Sterile container

<u>Stool in sterile container</u>

For the best results, stool specimens should be obtained during the acute phase of illness.

1. Label the sterile container (patient name, collection date/time).
2. Lift the toilet seat and place the white stool collection device at the rear of the toilet bowl; lower the seat.
3. Pass/expel the stool into the white stool collection device.
4. Using the wooden scoop, transfer stool from areas that appear bloody, slimy, or watery. If firm, collect from both ends and middle.
    a. Transfer a walnut-sized amount of stool into the sterile container.
    b. Place the scoop inside the sterile container.
    c. Carefully tighten the cap.
    d. Place the sterile container inside the zippered portion of the biohazard specimen bag and seal tightly.

Stool collection device

5. Fill out the requisition form completely. Fold it in half once and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
6. Transport at room temperature to the laboratory within 1 day of collection.

Storage & Transport

<u>Temperature</u>: Refrigerated temperature (2–8 °C/36–46 °F) for stool in a sterile container
<u>Maximum Holding Time</u>: 1 day (time from collection to test set-up) for stool in a sterile container

11. Varicella zoster and Herpes: Lesion swabs

Specimen

Lesion swab in VTM

1. Optimal specimen collection time is within the first 3 days after appearance of the vesicular lesion. Prior to specimen collection, patients should avoid topical treatments as these may reduce virus yield.
2. Swab affected area:
    a. Vesicular Lesion: Use a sterile needle to unroof the top of the vesicle. Use a sterile polyester swab to vigorously swab the base of the lesion, applying enough pressure to collect epithelial cells without causing bleeding while also collecting vesicular fluid. It is important to collect epithelial cells from the base of the lesion because they usually contain a significant amount of virus.
    b. Non-Vesicular Lesion: Pre-moisten swab with saline. Collect cells from the base of the lesion.
3. Place swab into viral transport medium (VTM) or universal transport medium (UTM).
4. Place the collection tube inside the zippered portion of the biohazard specimen bag and seal tightly.
5. Fill out the requisition form completely. Fold it in half once (no staples please) and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
6. Transport to the laboratory after collection. Specimen is stable at refrigerated temperatures for 7 days

Storage & Transport

Temperature: Refrigerated (2°C–8°C/35.6°F–46.4°F) or Frozen (–20°C/–4°F)
Maximum Holding Time: 7 days (time from collection to test set-up in laboratory)

e. Mycobacteriology test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Acid fast bacilli concentration (9900)	Processing procedure to decontaminate and concentrate respiratory specimens	Sputum, bronchial wash, other non-sterile respiratory specimens	Respiratory specimen collected in a sterile container	Refrigerated (2–8°C): 7 days	N/A	Daily	1 day	87015
AFB culture (3545)	Culture and isolation of mycobacteria from primary specimens	Specimens from non-sterile sites (e.g., sputum) and sterile sites (e.g., CSF, joint fluid)	Specimens collected in a sterile container; tissue specimens may be kept moist with saline	Refrigerated (2–8°C): 7 days for most specimens, 24 hours for urine	Negative at 4 and 6 weeks	Daily	Prelim: 4 weeks if negative Final: 6 weeks if negative (longer if positive)	87116
AFB fluorescent smear (3535)	Auramine O stain (or equivalent) for fluorescent detection and visualization of acid-fast bacilli	Specimens from non-sterile sites (e.g., sputum) and sterile sites (e.g., CSF, joint fluid)	Specimens collected in a sterile container; tissue specimens may be kept moist with saline	Refrigerated (2–8°C): 7 days for most specimens, 24 hours for urine	No acid-fast bacilli seen	Daily	1 day	87206
AFB isolate identification, set-up (3555)	Culture procedure for suspect mycobacterial isolates	Mycobacterial isolate	AFB inoculated onto culture medium (slant preferred)	Room temp. (15–25°C): 7 days	No acid-fast bacilli present	Daily	≥2 weeks to ID or referral	87118

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
AFB tissue homogenization (3540)	Processing procedure to grind and homogenize tissue specimens	Tissue from various sites	Tissue collected in a sterile container, may be kept moist with sterile saline	Refrigerated (2–8°C): 7 days	N/A	Daily	1 day	87176
M. tuberculosis amplification, MTB-RIF (3530)	Qualitative detection of *Mycobacterium tuberculosis* complex DNA and rifampin resistance in respiratory specimens by Xpert MTB/RIF assay	Sputum, bronchial washings/aspirate	Sputum in a sterile container (≥5 ml); bronchial washings in a sterile container (≥1 ml)	Refrigerated (2–8°C): 72 hours	Negative	Daily	1 day	87564
MALDI-TOF MS mycobacterial ID (3660)	Mass spectrometry analysis to speciate mycobacteria isolates	Mycobacterial isolate	AFB on LJ Gruft, 7H11, or 7H11 select medium, or in MP broth	Culture conditions: 7 days for rapid growers; 2–4 weeks for slow growers	N/A	Weekly	4 weeks once isolated	87118
Quantiferon Plus (8800)	Whole blood assay for detection of active and latent tuberculosis	Whole blood	Collection into a set of 4 Quantiferon tubes	Room temp. (17–25°C): 16 hours	Negative	Wed	5 days	86480

AFB, acid-fast bacilli; LJ Gruft, Lowenstein Jensen Gruft; N/A, not applicable; TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

f. Mycobacteriology specimen collection

1. Sputum collection (mycobacteriology and mycology)

Specimen

Sputum

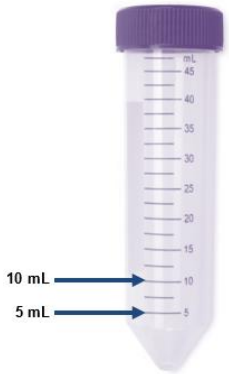
Sputum specimens should be collected in the early morning. Patients suspected of having TB should submit a minimum of 3 consecutive specimens at least 8 hours, but no more than 24 hours, apart.

1. Rinse throat and mouth with water (do not brush teeth or use mouthwash).
2. Cough very deeply and collect between 5 and 10 mL of sputum (about an inch high) into the specimen tube. Sputum is the mucus material from inside the lungs. Do not collect saliva or nasal discharge.
3. Tightly screw the cap onto the tube. If the cap is crooked, your specimen may leak and will be rejected.
4. Label the tube with the patient's name, date of birth, date collected and time collected.
5. Place the specimen tube inside the inner, clear specimen bag and seal the bag tightly.
6. Place the bagged specimen inside the zippered portion of the biohazard specimen bag and seal tightly.
7. Fill out the requisition form completely. Fold it in half once (no staples please) and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
8. Transport to the laboratory within 72 hours of collection.

Storage & Transport

Temperature: Refrigerated (2 °C – 8 °C / 36 °F – 46 °F)

Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)



Specimen Tube

2. Cerebrospinal fluid

Specimen

Cerebrospinal fluid in a sterile container

1. CSF is obtained by lumbar puncture. During the procedure, a needle is typically inserted between the 3rd and 4th lumbar vertebrae and the CSF fluid is collected for testing.
2. A minimum of 2 ml should be collected and placed in a sterile container.

Storage & Transport

Note: Storage and transport conditions depend on the type of testing performed. The most common conditions are described below. However, refer to the test information for exact conditions.

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

Maximum Holding Time: 72 hours (time from collection to test set-up in laboratory)

3. Quantiferon Plus

Specimen
Blood in QuantiFERON Plus blood collection tubes

e. **Fill blood tubes to correct volume:** The black mark on the side of the tubes indicates the 1 mL volume line. The QuantiFERON test has been validated for accuracy for tube volumes ranging from 0.8 to 1.2 mL. The 1 mL tubes fill slowly, so keep the tube on the needle for 2 - 3 seconds after the tube appears to have completed filling to ensure that the correct volume is drawn. If a "butterfly needle" is used, prime tubing with a "purge" tube before filling the QFT tubes to ensure proper fill volume.
f. **Invert tubes 10 times:** Immediately after filling the tubes, invert them 10 times just firmly enough to ensure that the entire inner surface of the tube is coated with blood. Overly vigorous shaking may cause gel disruption and could lead to aberrant results. It is essential that the blood mixes thoroughly with the antigens that have been dried onto the inner wall of the tubes.
g. **Label tubes:** Label each of the four tubes with the patient's name & date of birth, as well as the collection date and time. Place the labeled collection tubes inside the zippered portion of the biohazard specimen bag and seal tightly.
h. **Do not centrifuge, refrigerate, or freeze blood tubes.**
i. **Complete requisition form:** Fold it in half once (no staples please) and place in the outer pocket of the biohazard specimen bag (not inside the zippered pouch with the specimen).
j. Transport at room temperature to the laboratory ASAP, but within 16 hours of collection.

Storage & Transport
Temperature: room temperature (17 °C - 25 °C / 63 °F – 77 °F)
Maximum Holding Time: 16 hours, but ASAP preferred (Time from collection to test set-up in laboratory)

g. Mycology test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
MALDI-TOF MS mold ID (3950)	Mass spectrometry analysis to speciate mold (filamentous fungi) isolates	Mold isolate	Mold isolate on selective or non-selective agar (slant preferred)	Culture conditions: 48 hours	N/A	Weekly	1-2 weeks once isolated	87017
MALDI-TOF MS yeast ID (3950)	Mass spectrometry analysis to speciate yeast isolates	Yeast isolate	Yeast isolate on blood agar, Sabouraud-Dextrose agar, or Brain Heart Infusion agar	Culture conditions: 48 hours	N/A	Weekly	1 week once isolated	87016
Mycology culture: primary specimen (3905)	Culture and isolation of molds and yeast from primary specimens	Body fluid, scraping, or tissue	Varies (see mycology specimen collection instructions)	Varies (see mycology specimen collection instructions)	No growth at 1 week and 4 weeks	Daily	Prelim: 1 week Final: 4 weeks	87102
Mycology direct exam (3900)	KOH stain for detection of fungal elements in primary specimens	Body fluid, scraping, or tissue	Varies (see mycology specimen collection instructions)	Varies (see mycology specimen collection instructions)	No fungal elements seen	Daily	2 days	87220
Mycology identification, procedure (3980)	Biochemical, macroscopic, and/or microscopic analyses for identification of molds and yeast	Fungal isolate	Mold or yeast isolate on culture medium (slant preferred)	Room temp. (15–25°C): 7 days	N/A	Daily	2 weeks to ID or referral	87107

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Mycology isolate identification, set-up (3910)	Culture procedure for molds and yeast to set-up identification	Fungal isolate	Mold or yeast isolate on culture medium (slant preferred)	Room temp. (15–25°C): 7 days	N/A	Daily	2 weeks to ID or referral	87102

ID, identification; N/A, not applicable; TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

h. Mycology specimen collection

Specimen	Collection, storage, and transport
Abscess specimens	1. Abscess material is aseptically aspirated in a clinical setting using a syringe. Transport syringe without a needle, or transfer material to a sterile screw-cap container. If the quantity is very small, 0.1 to 0.5ml of sterile saline may be added. 2. If specimen is collected surgically, also submit a portion of the abscess wall. 3. A non-cotton tip aerobic swab can be used, several, if possible, is optimal. Swabs for collection of material from draining fistulas and sinus tracts are the least preferred collection device. 4. Hold at 2–8ºC, transport refrigerated or ambient within 72 hours, avoid freezing.
Body fluids other than CSF	1. Bloody specimens should be collected in a heparinized syringe. 2. Non-bloody specimens are submitted in sterile containers. 3. A minimum of 1 ml should be collected. In general, the more fluid obtained for culture, the better the chance of isolation of any fungal pathogen. 4. Hold at 2–8ºC, transport refrigerated or ambient within 72 hours, avoid freezing.
Bone marrow	A. Aseptically collect by sterile syringe or equivalent at least 0.3 ml to 1 ml in a sodium polyanethole sulfonate (SPS) or sodium heparin (heparin) blood tube. Transport to the lab within 24 hours, store at 2–8ºC. Transport refrigerated or ambient, avoid freezing.
Bronchoalveolar lavage, transtracheal aspirate, bronchial brush	1. Specimens are collected in a clinical setting; placed in a sterile container. 2. Bronchial brushes are placed in sterile saline, sterile distilled water, or brain heart infusion broth. 3. Hold specimen at 2–8ºC. Transport to the laboratory refrigerated within 72 hours.
CSF	1. CSF is obtained by lumbar puncture. A minimum of 2 ml should be collected and placed in a sterile container. 2. Hold at 2–8ºC, transport refrigerated or ambient within 72 hours, avoid freezing.
Cultures for identification	1. Submit a young, actively growing culture. Ideally isolates should be pure. 2. Cultures should be submitted immediately upon detection

	as some strains become pleomorphic over time making them difficult to identify.
Hair	1. Collect 10 to 20 hairs, best detected using a Wood's Lamp. Place in a sterile dry container. If no fluorescence is observed, scrape scalp scales and pluck hairs at the edge of infection. 2. For Piedra, cut off several hairs with nodules attached. 3. Hold specimen at ambient or refrigerated temperature (2–8ºC). Transport ambient or refrigerated; avoid freezing.
Nails	1. Cleanse nail area with 70% alcohol and allow to air dry. Clip or scrape affected areas of nail deeply enough to obtain recently invaded nail tissue. Also, scrape the nail bed to collect debris under nail. Place specimen in a dry sterile container. Store and transport at ambient or refrigerated temperature (2–8ºC).
Skin scrapings	1. Cleanse area with 70% alcohol and allow to air dry. Scrape the lesion margin and place the material in a dry sterile container, be sure to collect any moist exudate. 2. Hold specimen at ambient or refrigerated temperature (2–8ºC). Transport ambient or refrigerated; avoid freezing.
Sputum	a. Collect an early morning sputum produced by a deep cough into a sterile container. At least 5 ml of purulent material is optimal. Before collection the mouth should be cleansed; remove dentures or brush teeth. Induced sputum is acceptable. b. Deliver specimen to the laboratory as soon as possible, preferably within 2 hours of collection. If the specimen must be held, store at 2–8ºC for up to 72 hours. Transport refrigerated. Never freeze the specimen. c. A fresh specimen is important because endogenous saprophytic organisms may overgrow the systemic pathogens or inhibit them by acidifying the culture media.
Tissue and biopsy specimens	1. Generally, tissue and biopsy specimens are collected in a clinical setting and placed in a sterile screw-cap container with a small amount of sterile saline to prevent drying. 2. Hold at 2–8ºC. Transport specimen refrigerated or ambient within 72 hours. Avoid freezing.
Urine	1. Collect 10 to 50 ml of clean-catch urine (first morning is best), catheterized urine, or suprapubic aspirate in a sterile screw cap cup. Store the specimen at 2–8ºC. Transport to the

	laboratory refrigerated within 72 hours. Avoid freezing. 2. Urine preservative collection systems can be used for urinary tract infection culture but are not acceptable for systemic pathogen culture. Follow the manufacturer's transport and holding instructions for individual preservative systems.

i. Parasitology test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Parasite blood smear exam (4040)	Preparation and examination of thick and thin blood smears for parasites	Blood or prepared thick and think smears (×4)	Whole blood collected in EDTA	Room temp. (15–25°C): 1 day	Negative	Daily	1 day	87207
Gastrointestinal PCR panel (6500)	Biofire PCR panel that detects 22 agents (viruses, bacteria, and parasites) that cause diarrhea	Stool	Stool in Cary-Blair transport medium (preferred), stool in a sterile container	Cary-Blair: refrigerated to room temperature for up to 4 days Sterile container: ambient for 2 hours	No pathogens detected	Daily	1 day	87507

TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

j. Parasitology specimen collection

1. Blood smear for parasites

Specimen

<u>EDTA blood tube</u>

1. Collect an EDTA tube with the draw time marked on the tube as well as the date and patient's name.
2. Make a minimum of four (4) thick and four (4) thin smears as soon as possible or WITHIN 4 HOURS OF COLLECTION. DO NOT FIX.
    a. Note: Thick and thin smears can also be prepared at the laboratory.

Storage & Transport

1. Store EDTA tube and blood smears at room temperature (15–25 °C/59–77 °F).
2. Optimally, the EDTA tube and smears should be delivered to the laboratory on the same day as collection.

k. Serology test information

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
HIV antigen & antibody immunoassay, serum (5500)	Qualitative detection of HIV p24 antigen, antibodies to HIV-1, and antibodies to HIV-2 in blood	Serum (preferred) or plasma, spun	Venous blood collected in serum, serum-separator, EDTA, sodium citrate, heparin, or plasma-separator tube	Room temp. (18–30°C): 2 days Refrigerated (2–8°C): 7 days	Non-reactive	2x weekly	3 days	87389
HIV antibody differentiation test (5700)	Confirmation and differentiation of antibodies to HIV-1 and HIV-2 in blood	Serum (preferred) or plasma, spun	Venous blood collected in serum, serum-separator, EDTA, sodium citrate, or heparin tube	Room temp. (18–30°C): 2 days Refrigerated (2–8°C): 7 days	Negative	2x weekly	3 days	86689
RPR, serum (5035)	Detection of anti-lipid antibodies (reagin) in serum or plasma	Serum (preferred) or plasma, spun	Venous blood collected in serum, serum-separator, EDTA, sodium citrate, heparin, or CPD tube	Serum: Refrigerated (2–8°C) for 5 days; frozen (<-20°C) for 30 days Plasma: Refrigerated (2–8°C) for 48 hours	Non-reactive	2x weekly	3 days	86592
RPR, serum, titer (5040)	Titer determination of anti-lipid antibodies (reagin) in serum or plasma	Serum (preferred) or plasma, spun	Venous blood collected in serum, serum-separator, EDTA, sodium citrate, heparin, or CPD tube	Serum: Refrigerated (2–8°C) for 5 days; frozen (<-20°C) for 30 days Plasma: Refrigerated (2–8°C) for 48 hours	Non-reactive	2x weekly	3 days	86593

Test (Order code)	Description	Specimen(s)	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)	CPT code
Treponema pallidum particle agglutination test (5065)	Qualitative detection of antibodies against *Treponema pallidum* in serum or plasma	Serum (preferred) or plasma	Venous blood collected in serum, serum-separator, EDTA, sodium citrate, or heparin tube	Serum: Refrigerated (2–8°C) for 5 days; frozen (<-20°C) for 30 days Plasma: Refrigerated (2–8°C) for 48 hours	Non-reactive	2x weekly	3 days	86780
VDRL, CSF (5060)	Qualitative detection of anti-lipid antibodies (reagin) in CSF	CSF	CSF collected in a sterile container	Refrigerated (2–8°C): 5 days	Non-reactive	2x weekly	3 days	86592
VDRL, CSF, titer (5050)	Quantitative detection of anti-lipid antibodies (reagin) in CSF	CSF	CSF collected in a sterile container	Refrigerated (2–8°C): 5 days	Non-reactive	2x weekly	3 days	86593

CPD, citrate phosphate dextrose; CSF, cerebrospinal fluid; TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

I. Serology specimen collection

1. Serum

Specimen

Serum in a serum separator tube (SST)

1. Collect ≥5 ml of blood into an SST by venipuncture.
2. If possible, centrifuge the blood immediately afterward.

Storage & Transport

Note: Storage and transport conditions depend on the type of testing performed. The most common conditions are described below. However, refer to the test information for exact conditions.

Non-centrifuged blood

Temperature: Room temperature (15–25 °C/59–77 °F)

Maximum Holding Time: 24 hours (time from collection to receipt by laboratory)

Centrifuged blood

Temperature: Refrigerated (2–8 °C / 35.6–46.4 °F)

Maximum Holding Time: 5 to 7 days (time from collection to test set-up in laboratory)

m. Water and shellfish test information

Test (Order code)	Description	Sample	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)
Drinking water							
Total coliforms & E. coli Presence-Absence (8040)	Detection of total coliforms and *E. coli* in potable drinking water	Drinking water	Collection in a 100 mL Idexx bottle	Refrigerated (2–8°C): 30 hours	Absent	Daily	1 day
Total coliforms & E. coli MPN, Undiluted (8350)	Detection and enumeration of total coliforms and *E. coli* in potable drinking water	Drinking water	Collection in a 100 mL Idexx bottle	Refrigerated (2–8°C): 30 hours	<1 MPN/100 mL	Daily	1 day
Heterotrophic plate count (8045)	Estimation of the number of live heterotrophic bacteria in a water sample	Drinking water	Collection in a 100 mL Idexx bottle	Refrigerated (2–8°C): 8 hours	<1 CFU/100 mL	Daily	2 days
Ambient (recreational and ocean) water							
Total coliforms & E. coli MPN, Undiluted (8350)	Detection and enumeration of total coliforms and *E. coli* in ambient water	Ambient water	Collection in a 120 mL sterile Click Seal bottle	Refrigerated (2–8°C): 8 hours	<1 MPN/100 mL	Daily	1 day
Total coliforms & E. coli MPN, 1:10 dilution (8025)	Detection and enumeration of total coliforms and *E. coli* in ambient water	Ambient water	Collection in a 120 mL sterile Click Seal bottle	Refrigerated (2–8°C): 8 hours	<10 MPN/100 mL	Daily	1 day
Enterococci MPN, undiluted (8110)	Detection and enumeration of Enterococci in ambient water	Ambient water	Collection in a 120 mL sterile Click Seal bottle	Refrigerated (2–8°C): 8 hours	<1 MPN/100 mL	Daily	1 day

Test (Order code)	Description	Sample	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)
Enterococci MPN, 1:10 dilution (8010)	Detection and enumeration of Enterococci in ambient water	Ambient water	Collection in a 120 mL sterile Click Seal bottle	Refrigerated (2–8°C): 8 hours	<10 MPN/100 mL	Daily	1 day
Spa and swimming pool water							
Heterotrophic plate count (8045)	Estimation of the number of live heterotrophic bacteria in spa or pool water	Spa or pool water	Collection in a 100 mL Idexx bottle	Refrigerated (2–8°C): 30 hours	<1 CFU/100 mL	Daily	2 days
Shellfish and shellfish growing waters							
NSSP Thermotolerant (fecal) coliforms, A-1, growing water (8710)	Enumeration of thermotolerant (fecal) coliforms by multiple tube fermentation (AOAC method)	Shellfish growing water	Collection in a 120 mL sterile Click Seal bottle	Refrigerated (2–8°C): 30 hours	<1.8 MPN/100 mL	By appointment	1–2 days
NSSP Total coliforms, process water (8720)	Enumeration of total coliforms by multiple tube fermentation (NSSP-modified method)	Shellfish process water	Collection in a sterile Nalgene bottle	Refrigerated (2–8°C): 30 hours	<1.1 MPN/100 mL	By appointment	4 days
NSSP Thermotolerant (fecal) coliforms, ocean shellfish (8770)	Enumeration of thermotolerant (fecal) coliforms by multiple tube fermentation (APHA method)	Ocean shellfish	Harvest of at least 12 shellfish (meat weight >200 g)	Refrigerated (0–4°C): 24 hours	<1.8 MPN/100 g	By appointment	3 days

Test (Order code)	Description	Sample	Collection	Storage/transport	Reference range	Testing schedule	TAT (business days)
NSSP Thermotolerant (fecal) coliforms, process shellfish (8780)	Enumeration of thermotolerant (fecal) coliforms by multiple tube fermentation (NSSP-modified method)	Process shellfish	Harvest of at least 12 shellfish (meat weight >200 g)	Refrigerated (0–4°C): 24 hours	<4 MPN/100 g	By appointment	3 days

CFU, colony forming unit; MPN, most probable number; TAT, turnaround time (estimated maximum time from specimen receipt to result, where the time is dependent upon day of receipt, testing schedule, and length of testing).

n. **Water and shellfish specimen collection**

1. Water collection in a 100 mL Idexx bottle

Sample

Water in Idexx bottle

2. Use only sterile containers supplied by the laboratory. Sample bottles can be picked up and dropped off at any of the Public Health Department locations in San Luis Obispo, Paso Robles, and Grover Beach.
3. Do not collect samples from a swivel head faucet. When taking water samples, remove the aerator; **flush the lines** by opening the cold water tap and running water for 2 to 3 minutes.
4. Carefully open the bottle — **do not touch the inside** of the bottle or lid.
5. **Do not rinse** out the bottle and **do not touch or dump** out the white powder.
6. Fill the bottle carefully to the **100 ml line** on the bottle (**DO NOT UNDERFILL** or OVERFILL), making sure the powder stays in the bottle. Close the cap tightly.
7. **Fill in all the requested fields** on the laboratory requisition (test request form). For guidance filling out the requisition, see Environmental Testing Requisition Instructions document or contact us. Create a sample ID number and write it on both the bottle and the requisition.
8. Water must begin cooling, to refrigerator temperature, immediately after collection. **Use cooler** with ice packs or equivalent for transport. Do not freeze.
9. Cost of testing is posted at www.slocounty.gov/PH-Lab, payable when the water sample is delivered to any Public Health Department. If testing shows the drinking water is unsafe to drink, a "Retest" sample will incur the same fee.
10. Please note on the laboratory requisition if the water test is for FHA, VA, or Cal-Vet Loans.

Idexx Water
Collection Bottle

Storage & Transport
Temperature: Refrigerated 2–8°C (36–46°F), not frozen.
Maximum Holding Time: 30 hours (time from collection to test set-up in laboratory incubator)

2. Water collection in a 120 mL sterile Click Seal bottle

Sample

Water in Click Seal bottle

1. Keep the sampling bottle unopened until right before filling.
2. For sampling hold the bottle near the base and plunge it neck downward below the surface. Once below the surface tilt the bottle to allow filling. During filling, the bottle should be pushed horizontally forward in a direction away from the hand to avoid contamination.
3. Do not touch the threads, inside, or lid interior of the bottle. Touching the interior of the bottle contaminates the sample and may affect results.
4. If sample/bottle is contaminated, collect a new sample.
    a. The contaminated sample may be used as the temperature blank.
5. To allow for shaking, please do not fill the bottle completely full.

Sterile Click Seal Bottle

Storage & Transport

Temperature: Refrigerated 2–8°C (36–46°F)

Maximum Holding Time: 8 or 30 hours depending on the test (time from collection to test set-up in laboratory incubator)

3. Water collection in a sterile Nalgene bottle

Sample

Water in sterile Nalgene bottle

1. Keep the sampling bottle unopened until right before filling.
2. For sampling hold the bottle near the base and plunge it neck downward below the surface. Once below the surface tilt the bottle to allow filling. During filling, the bottle should be pushed horizontally forward in a direction away from the hand to avoid contamination.
3. Do not touch the threads, inside, or lid interior of the bottle. Touching the interior of the bottle contaminates the sample and may affect results.
4. If sample/bottle is contaminated, collect a new sample.
    a. The contaminated sample may be used as the temperature blank.
5. To allow for shaking, please do not fill the bottle completely full.

Sterile Nalgene Bottle

Storage & Transport

Temperature: Refrigerated 2–8°C (36–46°F)

Maximum Holding Time: 30 hours (time from collection to test set-up in laboratory incubator)

IV. Reportable diseases

California Code of Regulations, Title 17, Section 2500, mandates that certain communicable and non-communicable diseases/conditions be reported to the local health authority by specified methods and time frames. The List of Reportable Diseases, which summarizes disease reporting requirements, may be downloaded from the web, and freely copied.

In addition, California Code of Regulations, Title 17, Section 2505 requires laboratories to report laboratory testing results, including molecular and pathologic results, suggestive of diseases of public health importance to the local health department. Laboratories must report any initial findings as well as any subsequent findings. In addition, laboratories must report negative test results or findings when requested by the Department or a local health officer.

The specimens or isolates listed below must be submitted as soon as available to the local or state public health laboratory. The isolate or specimen submission must include the name, address, and date of birth of the person from whom the isolate or specimen was obtained, the patient identification number, the isolate or specimen accession number or other unique identifier, the date the isolate or specimen was obtained from the patient, the name address, and telephone number of the health care provider for whom such examination or test was performed, and the name, address, telephone number and laboratory director's name of the laboratory submitting the isolate or specimen.

Specimens:

- Malaria positive blood film slides
- *Neisseria meningitidis* eye specimens
- Shiga toxin-positive fecal broths
- *Vibrio* positive by culture independent diagnostic test
- Zika virus immunoglobulin M (IgM)-positive sera (m)(2)

Isolates:

- *Cronobacter sakazakii* isolates in infants less than one year of age
- Drug resistant *Neisseria gonorrhoeae* isolates (cephalosporin or azithromycin only)
- *Legionella*
- *Listeria monocytogenes* isolates
- *Mycobacterium tuberculosis* isolates (see (f) for additional reporting requirements) •
- *Neisseria meningitidis* isolates from sterile sites
- Salmonella isolates (see section 2612 for additional reporting requirements)
- Shiga toxin-producing *Escherichia coli* (STEC) isolates,including O157 and nonO157 strains
- *Shigella* isolates
- *Vibrio cholerae*