

WYOMING DEPARTMENT OF HEALTH PUBLIC HEALTH LABORATORY



WPHL: (307) 777-7431

MICROBIOLOGY LABORATORY TESTING AND SAMPLE
SUBMISSION CRITERIA

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Serology and Immunology Laboratory

Chlamydia (CT) and Gonorrhea (GC)

Cost of Test: \$14.00

Test name as listed in Lab Web Portal: Chlamydia (CT) / Gonorrhoeae (GC)

Specimen Collection Kit: Aptima Urine Tube, Aptima Unisex Tube (swab for endocervical and urethral specimens), and/or Aptima Multi-Site Tube (swab). Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative target amplification test using target capture, TMA, and DKA.

Specimen Requirements:

- Eye, pharyngeal, oral, rectal, and vaginal samples collected in APTIMA Orange Multi-Site Swab Collection Tube.
- Endocervical and urethral samples collected in APTIMA Purple/White Endo Swab Collection Tube.
- Urine samples collected in APTIMA Yellow Urine Collection Tube.
- Collection tubes contain a lysis buffer that should not be poured out.
- Fill urine to the window presented on the collection tube and ensure that labels do not cover any fill windows or tube expiration dates.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Extragenital Swab (Oropharyngeal, Rectal swabs):
 - Frozen: -20°C to -70°C (for 60 days)
 - Ambient: 4°C to 30°C (for 60 days)
- Urine Specimen:
 - Frozen: -20°C to -70°C (for 12 months)
 - Ambient: 2°C to 30°C (for 30 days)
- Endocervical and Vaginal Swabs:
 - Frozen: -20°C to -70°C (for 12 months)
 - Ambient: 2°C to 30°C (for 60 days)

Turn-around Time:

- 7 days

WPHL Reporting:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. Additionally, a courtesy call is made to inform providers of Positive results.

Hepatitis B

Cost of Test: \$15.00 per analyte

Analytes evaluated in this test:

- Core, Surface Antibodies, Surface Antigens (HBc-IgM, Anti-HBs, HbsAg)

Test name as listed in Lab Web Portal: Hepatitis B Core IgM, Hepatitis B Surface Antibody, Hepatitis B Surface Antigen

Type of Test: Qualitative analysis using chemiluminescence immunoassay (CLIA)

Specimen Requirements:

- Serum samples collected in Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tube containing serum gel separator. Ensure labels do not cover expiration dates listed on the tube.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: 2 Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tubes are recommended. For serum samples, samples that have been poured off at facilities are accepted.

Transport Temperature:

- Refrigerated: 2°C to 8°C (7 days)
- Frozen: ≤-20°C (sample can be frozen and thawed up to 6 times)

Turn-around Time:

- 7 days

WPHL Reporting:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. A courtesy call is made for critical results, including HBsCore, HBsAg, and HCV.

Hepatitis C Antibody

Cost of Test: \$20.00

Test name as listed in Lab Web Portal: Hepatitis C Antibody

Type of Test: Qualitative analysis using chemiluminescence immunoassay (CLIA)

Specimen Requirements:

- Serum samples collected in Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tube containing serum gel separator. Ensure labels do not cover expiration dates listed on the tube.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: 2 Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tubes are required.

Transport Temperature:

- Refrigerated: 2°C to 8°C (7 days)
- Frozen: ≤-20°C (for 3 months)

Turn-around Time:

- 7 days

WPHL Reporting:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. A courtesy call is made for critical results, including HBsCore, HBsAg, and HCV.

HIV Combo Ag/Ab

Cost of Test: \$30.00, confirmatory testing \$15.00

Test name as listed in Lab Web Portal: HIV Screening

Type of Test: Qualitative analysis using chemiluminescence immunoassay (CLIA)

Specimen Requirements:

- Serum samples collected in Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tube containing serum gel separator. Ensure labels do not cover the expiration date listed on the tube.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: 2 Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tubes are required.

Transport Temperature:

- Ambient: 18°C to 30°C (for 3 days)
- Frozen: ≤-20°C (sample can be frozen and thawed up to 7 times)
- Refrigerated: 2°C to 8°C (for 7 days)

Turn-around Time:

- Within 48 hours of arrival

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Reactive and Non-Reactive samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. A courtesy call is made for Reactive results to inform providers.

MMRV

Cost of Test: \$6.00 per analyte

Analytes evaluated in this test:

- Measles (Rubeola), Mumps IgG, Rubella IgG, Varicella-Zoster IgG

Test name as listed in Lab Web Portal: Rubeola IgG, Mumps IgG, Rubella IgG, Varicella-Zoster IgG

Type of Test: Qualitative analysis using chemiluminescence immunoassay (CLIA)

Approval for PCR is required: If the submitter is requesting PCR confirmation for any of the four tests, contact Wyoming Public Health Laboratory, Serology and Immunology Lab (307-777-8222) prior to submission of a separate sample.

Specimen Requirements:

- Serum samples collected in a Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tube containing serum gel separator. Ensure labels do not cover the expiration date listed on the tube.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 9 days)
- Frozen: ≤-20°C (for 2 weeks)

Notes: Varicella-Zoster IgG samples, if refrigerated, need to be tested 7 days after collection. WPHL can test individual vaccine preventables, if requesting all four tests, each order item needs to be selected.

Turn-around Time:

- 7 days

WPHL Reporting:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. This panel does not include any critical results.

QuantiFERON TB - Gold Plus

Cost of Test: \$40.00

Test name as listed in Lab Web Portal: Quantiferon (QFT)

Specimen Collection Kit: QuantiFERON-TB Gold Plus HA Blood Collection Tubes. Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative analysis using chemiluminescence immunoassay

Specimen Requirements:

- Whole blood or plasma collected in Qiagen High Altitude TB Gold Plus Tubes. Fill tubes to fill line and Ensure labels do not cover fill line or expiration date.
- Tubes must be incubated at 37°C (+/- 1°C) for 16-24 hours within 16 hours of collection.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 28 days)

Turn-around Time:

- 7 days

WPHL Reporting:

- Results are reported within 24 hours of test completion. Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. A courtesy call is made for Positive results to notify providers.

Syphilis (RPR)

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Syphilis (RPR) Screen, Syphilis (RPR) Titer

Type of Test: Qualitative and semiquantitative nontreponemal flocculation ASI RPR card test.

Specimen Requirements:

- Serum samples collected in a Red/Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tube containing serum gel separator. Ensure labels do not cover the expiration date listed on the tube.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: 2 Red(Red-Grey (tiger)/Yellow/Orange Top Serum or Serum Separator Tubes are recommended.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 7 days)
- Frozen: ≤-20°C (for 3 months)

Turn-around Time:

- 7 days

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. A courtesy call is made for Positive results to inform providers.

Molecular Laboratory

Bordetella pertussis

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Pertussis PCR

Specimen Collection Kit: Remel Bactiswab and Remel Bactiswab Liquid. Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative and differential real-time PCR

Specimen Requirements:

- Dry swabs are the preferred specimen type for this test. They must be placed in original plastic or paper sheath.
- Nasopharyngeal swabs or nasal washes placed in viral/universal transport media (VTM/UTM) are also acceptable. Ensure the lid is on tight and parafilm if needed to prevent leaks and spills.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)

Turn-around Time:

- 7 Days

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements.

Flu SC2 Multiplex PCR Assay

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- SARS-CoV-2, Influenza A, Influenza B

Test name as listed in Lab Web Portal: Influenza/SARS-CoV-2 Multiplex PCR

Specimen Collection Kit (recommended): Synthetic (.i.e Rayon, Dacron) Sterile Collection Swab and Viral Transport Media (VTM). Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative and differential real-time RT-PCR multiplexed test

Specimen Requirements:

- Accepted specimen types include: Nasopharyngeal (NP) swab (preferred), oropharyngeal (OP) swab, nasal swab (NS), or nasal aspirate in viral transport medium (VTM) or universal transport medium (UTM). The minimum volume required for each sample is 1mL VTM or UTM. Ensure the lid is secure and add parafilm if necessary to prevent leaks and spills.
- If a test is being sent for Influenza A Subtyping, it is recommended the specimen is sent to the PHL within 24 hours of collection.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel who are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)
- Frozen: ≤-70°C (dry ice)

Turn-around Time:

- 24 Hours

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements.

Measles PCR Assay

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- Measles Virus RNA

Test name as listed in Lab Web Portal: Measles PCR

Specimen Collection Kit (recommended): Synthetic (i.e., Rayon, Dacron) Sterile Collection Swab and Viral Transport Media (VTM). Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative real-time RT-PCR test

Specimen Requirements:

- Accepted specimen types include: Nasopharyngeal (NP) swab in viral transport medium (VTM). The minimum volume required for each sample is 1mL VTM. Ensure the lid is secure and add parafilm if necessary to prevent leaks and spills.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel who are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)
- Frozen: ≤-70°C (dry ice)

Turn-around Time:

- 72 hours
- Expedited specimen testing may be requested with Epidemiologist approval

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements.

****The Measles PCR assay does not differentiate between wild-type and vaccine strains but only determines the presence of the virus. Results should be considered in combination with the patient's vaccine history and risk of exposure.**

Norovirus

Cost of Test: \$40.00, waived

Test name as listed in Lab Web Portal: Norovirus PCR

Specimen Collection Kit: Enteric Transport Medium (ETM) and Stool Collection Kit. Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Real-time RT-PCR Assay

Specimen Requirements:

- Add raw stool to the ETM container until it reaches the fill line, ensure the container contains the buffer solution.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: Collection kits for outbreaks are sent out by WPHL.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)

Turn-around Time:

- 3 Days

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements.

QIAstat Respiratory Panel

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- Adenovirus
- Coronavirus 229E
- Coronavirus HKU1
- Coronavirus NL63
- Coronavirus OC43
- SARS-CoV-2
- Human Metapneumovirus A+B
- Influenza A H1
- Influenza A H3
- Influenza A H1N1/pdm09
- Influenza B
- Parainfluenza Virus 1
- Parainfluenza Virus 2
- Parainfluenza Virus 3
- Parainfluenza Virus 4
- Rhinovirus/Enterovirus
- Respiratory Syncytial Virus A+B
- *Bordetella pertussis*
- *Chlamydophila pneumoniae*
- *Mycoplasma pneumonia*

Test name as listed in Lab Web Portal: Respiratory Panel

Specimen Collection Kit (recommended): Synthetic (.i.e Rayon, Dacron) Sterile Collection Swab and Viral Transport Media (VTM). Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Qualitative and differential multiplexed nucleic acid real-time PCR.

Specimen Requirements:

- Add nasopharyngeal (NP) swab to viral/universal transport medium. Ensure the lid is on tight and parafilm if need be to prevent leaks and spills.
- Samples submitted for surveillance purposes may be frozen and batched. Contact WPHL (307-777-7431) for batch sample submission guidance.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)
- Frozen: ≤-70°C (dry ice)

Turn-around Time:

- 10 Days

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements.

West Nile Virus (WNV) and St. Louis Encephalitis (SLE)

Cost of Test: \$20.00

Test name as listed in Lab Web Portal: WNV/SLE Duplex IgM Assay

Type of Test: Microsphere Immunoassay (MIA)

Specimen Requirements:

- Serum samples collected in Red/Yellow/Orange Top Serum Separator Tube containing serum gel separator. Ensure labels do not cover expiration dates listed on the tube.
- CSF samples collected in appropriate vial.
- Samples submitted for surveillance purposes may be frozen and batched for up to 30 days.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: For CSF samples, 0.5mL minimum volume requirement.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 30 days)
- Frozen: ≤-20°C (ship frozen samples on dry ice)

Turn-around Time:

- 14 Days

WPHL Reporting and Referrals:

- Results are reported within 24 hours of test completion. Both Positive and Negative samples are available on the Lab Web Portal (LWP) and can also be sent by fax to meet notification requirements. Non-Specific samples will be referenced to CDC for PRNT Testing.

Bacteriology Laboratory

Bacterial Identification

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Bacterial Culture/ID

Type of Test: Culture identification of a bacterial isolate

Specimen Requirements:

- Pure culture isolates are acceptable if grown on appropriate media, provided the growth is clearly visible and the isolate is confirmed to be pure.
- For CSF or blood culture bottles please call the Bacteriology Laboratory for prior approval: 307-777- 6062. Send samples within 7 days of collection, if possible.
- For CSF, collect at least 0.5mL of CSF in an appropriate vial **-OR-** collect a minimum of 1.0mL of blood in an appropriate blood culture bottle.
- CSF specimens should be plated within one hour for proper culture results. If the sample is delayed more than four hours, store the CSF sample at 2°C to 8°C for up to five days. After five days, store the CSF frozen at ≤-20°C.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Blood Samples:
 - Refrigerated: 2°C to 8°C (for 7 days)
- CSF:
 - Refrigerated: 2°C to 8°C (for 5 days)
 - Frozen: ≤-20°C (after 5 days)
- Other Specimen Types:
 - Ambient: 15°C to 25°C (for 7 days)

Turn-around Time:

- Turn-around time for all of Bacteriology is set to 44 days. Most samples are completed within 5 business days or less.

WPHL Reporting and Referrals:

- Test results are reported within 1 day of completion. All sample results are accessible in real time through the Lab Web Portal (LWP) and can also be provided upon request. If a sample requires referral, a preliminary report is sent to the submitter.

Candida Spp. Identification

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Candida species ID

Type of Test: Culture identification of a fungal isolate

Specimen Requirements:

- Isolate can be from any body site and grown on appropriate media plates or slants such as Blood Agar (BA) media or Sabouraud Dextrose Agar (SAB).
- Please send samples within 7 days of collection, if possible.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: BA or SAB is preferred but not required.

Transport Temperature:

- Ambient: 15°C to 25°C

Turn-around Time:

- Turn-around time for all of Bacteriology is set to 44 days. Most samples are completed within 5 business days or less.

WPHL Reporting and Referrals:

- Test results are reported within 1 day of completion. All sample results are accessible in real time through the Lab Web Portal (LWP) and can also be provided upon request. If a sample requires referral, a preliminary report is sent to the submitter.

CRO (CRE, CRPA, CRAB)

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Carbapenem Resistance Testing

Type of Test: Streck-PCR, E-testing, and culture identification of a bacterial isolate

Specimen Requirements:

- Acceptable specimens must be carbapenem resistant pure isolates (from all types of sources) that have been previously tested at the clinical lab level with a resistant minimum inhibitory concentration (MIC).
- Targeted agents accepted are:
 - *Acinetobacter baumannii* isolates resistant to doripenem, imipenem, meropenem, or using current CLSI breakpoints.
 - *Enterobacter* sp., *Escherichia coli*, *Klebsiella aerogenes*, *Klebsiella oxytoca*, and *Klebsiella pneumonia* that are resistant to doripenem, ertapenem, imipenem, meropenem, or using current CLSI breakpoints.
 - *Pseudomonas aeruginosa* (non-mucoid only) isolates that are resistant to doripenem, imipenem, meropenem, or using current CLSI breakpoints.
- Please send samples within 7 days of collection, if possible.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: Include results of the antimicrobials tested with sample submission. Contact WPHL (307-777-6062) for more information about testing other non-targeted organisms listed.

Transport Temperature:

- Ambient: 15°C to 25°C

Turn-around Time:

- Turn-around time for all of Bacteriology is set to 44 days. Most samples are completed within 5 business days or less.

WPHL Reporting and Referrals:

- Test results are reported within 1 day of completion. All sample results are accessible in real time through the Lab Web Portal (LWP) and can also be provided upon request. If a sample requires referral, a preliminary report is sent to the submitter. An alert is sent out to our Federal partners and our HAI Epidemiologist within 1 day of test completion when required.

Enteric Screening

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Enteric Screen (FB)

Specimen Collection Kit: Enteric Transport Medium (ETM) and Stool Collection Kit. Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: Culture identification of a bacterial isolate

Analytes evaluated in this test:

- *Campylobacter spp.*, *Salmonella spp.*, *Escherichia coli (stx pos)*, *Yersinia spp.*, *Vibrio spp.*, and other pathogens as identified by MALDI.

Specimen Requirements:

- Specimens may be stool in Cary-Blair Transport Medium or isolates on appropriate media.
- Collect raw stool specimen to fill line on enteric transport medium (ETM) within 4 hours of collection.
- Please send samples within 4 days of collection, if possible.
- If *Shigella* species is suspected, please send stool at ambient temperature.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: WPHL sends out collection kits for outbreaks.

Transport Temperature:

- Ambient: 15°C to 25°C (for 7 days) [*Shigella* species only]
- Refrigerated: 2°C to 8°C (for 7 days)

Turn-around Time:

- Turn-around time for all of Bacteriology is set to 44 days. Most samples are completed within 5 business days or less.

WPHL Reporting and Referrals:

- Test results are reported within 1 day of completion. All sample results are accessible in real time through the Lab Web Portal (LWP) and can also be provided upon request. If a sample requires referral, a preliminary report is sent to the submitter.

Shiga Toxin Testing

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Bacterial Culture/ID

Specimen Collection Kit: Enteric Transport Medium (ETM) and Stool Collection Kit. Specimen collection kits may be ordered through the Wyoming Public Health Laboratory website and submitted via email or fax.

Type of Test: EHEC, STAT EHEC, and culture identification of a bacterial isolate.

Specimen Requirements:

- Specimens may be stool in Cary-Blair Transport Medium.
- Collect raw stool specimen to fill line on enteric transport medium (ETM) within 4 hours of collection.
- Specimens may be in MacConkey Broth, GN Broth (without Shiga toxin inhibitor), or a pure culture isolate of a Shiga toxin-positive organism, or a suspected Shiga toxin-positive organism, on appropriate media where growth is evident.
- If specimen is in broth or a pure culture isolate, please send at ambient temperature.
- If *Shigella* species is suspected, send stool/fecal sample at ambient temperature.
- Please send samples within 7 days of collection, if possible.
- If sample is stool/fecal in ETM, please send within 4 days of collection, if possible.
- Ship sample(s) according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: WPHL will send out collection kits for outbreaks.

Transport Temperature:

- Ambient: 15°C to 25°C (for 7 days)
- Refrigerated: 2°C to 8°C (for 7 days)

Turn-around Time:

- Turn-around time for all of Bacteriology is set to 44 days. Most samples are completed within 5 business days or less.

WPHL Reporting and Referrals:

- Test results are reported within 1 day of completion. All sample results are accessible in real time through the Lab Web Portal (LWP) and can also be provided upon request. If a sample requires referral, a preliminary report is sent to the submitter. A courtesy call for Shiga-toxin Positive results is attempted to alert providers.

Mycobacterium tuberculosis Testing (outsourced)

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: TB Smear & Culture/ID

Approval for this test is required: Contact the Communicable Disease TB Unit at 307-777-3562 or 307-777-6563 prior to submission of the sample. Please notify the laboratory of the incoming sample via email (WPHL@wyo.gov).

Specimen Requirements:

Sputum

- Three specimens collected 8 to 24 hours apart with the first specimen collection occurring first thing in the morning. Each specimen collected contains 5 to 10mLs of sputum and is labeled with which collection it is (1, 2, or 3) and the approximate time collected.
- Collection tube (e.g., a 50mL conical or a urine cup) is sealed with parafilm or taped to prevent leakage.
- Ship sputum specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Isolate

- Solid media: Lowenstein-Jensen (LJ), Middlebrook 7H10 or 7H11, and Ogawa
- Liquid media/Automated liquid culture (Modified Middlebrook 7H9): BacT/ALERT 3D, MGIT, VersaTREK.
- Ship isolate specimens according to Category A Infectious Disease Packaging (Class 6.2) requirements. Trackable Shipping is required for specimens sent through a third party (FedEx). Ensure specimens are shipped by personnel that are properly trained in shipping Category A infectious substances.

Note: It is preferred to have respiratory specimens shipped daily after collection, but it is acceptable to ship the three separate consecutive days of sputum collections in one shipment. If one shipment is preferred, refrigerate (2°C to 8°C) collected sputum samples. WPHL can provide sputum collection kits.

Transport Temperature:

- Ambient: 15°C to 25°C (for 7 days). Isolates must be shipped according to Class 6.2 Infectious Substances regulations.

Turn-around Time:

- This is an outsourced test, turn-around time is not established by WPHL for this request.

WPHL Reporting and Referrals:

- Due to the nature of TB, obtaining a final report may take several weeks. WPHL will send preliminary reports when the reference laboratory makes preliminary results available.

Preparedness and Bioterrorism Laboratory

Special Instructions

For testing by the Preparedness Lab, first contact the Infectious Disease Epidemiology Unit. In some cases, emergency pickup and stat testing may be recommended. Epidemiology and Preparedness Lab staff will guide appropriate sample collection, storage, and transport for non-culture isolate specimens.

The Preparedness and Bioterrorism Laboratory prefers Rule out or Refer (Ro/R) procedures to be completed by the submitting lab before sending a bacterial isolate. For more information on Ro/R, visit the WPHL website, navigate to the "Preparedness Laboratory" tab, and go to the "[Testing and Training Resources](#)" page. There, you'll find Rule out or Refer bench cards, Pathogen Safety Data Sheets (PSDS), and online training. Additional details on sample collection, culture setup, and Ro/R can be found on the ASM Sentinel Laboratory Guidelines site: <https://asm.org/articles/cphmc/laboratory-response-network-lrn-sentinel-level-c>.

Sentinel sites are not required to perform Ro/R procedures; this is at each facility's discretion. If performed, the following heightened safety measures are recommended: incubate suspect cultures in a CO₂ jar or bag, open them only in a biosafety cabinet, use respiratory protection, and work in an isolated lab space. Use front-close gowns and face shields, soak waste in 10% bleach or 10-30% formalin for 24 hours before autoclaving or incinerating, and decontaminate surfaces with 10% bleach followed by 70% isopropyl alcohol or water.

When performing Ro/R procedures, it's preferred that the sentinel lab forward all materials used (plates, biochemicals—excluding waste). If a Select Agent is identified, having all materials in WPHL possession simplifies compliance with Select Agent regulations. However, this is not mandatory. If materials are not forwarded and a Select Agent is confirmed, the sentinel lab is responsible for specimen security, safety, destruction, and Select Agent regulations. Completion of APHIS/CDC Forms 2, 3, or 4 may be required if a select agent is identified. WPHL can provide additional guidance if needed.

Preparedness Laboratory contacts:

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Bacillus anthracis

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Bacillus anthracis Panel (Anthrax)

Type of test: Qualitative real-time PCR, WPHL culture-based testing

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Whole blood collected in a purple top EDTA tube or blue top sodium citrate tube **-OR-** dry Clinical Swab **-OR-** Bacterial Culture Isolate(s) on a Blood Agar Plate (BAP), Blood Slant, Chocolate Agar Plate, Chocolate Slant.
- **Do NOT centrifuge** samples
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must be labeled as "Preparedness Laboratory Sample."
- Ship suspected *Bacillus anthracis* specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: The WPHL Preparedness Lab can test other sample types; please contact the WPHL Preparedness Laboratory to discuss alternative sample types: 307-777-7431.

Transport Temperature:

- Ambient: 15°C to 25°C
- Refrigerated: 2°C to 8°C (Whole blood samples only)

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of receiving the sample. Plates may be held for a minimum of five days prior to final reporting.

WPHL Reporting and Referrals:

- WPHL will report an Equivocal, Confirmatory, or Negative result to the submitter. A referral may also be requested by the CDC for further characterization. Negative isolates may be referred to WPHL bacteriology for identification upon submitter or epidemiology request.

Do not order this organism as a Bacterial ID

Biofire Warrior Panel (Ebola, Marburg, and Q-Fever)

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- *Coxiella burnetii*, Ebolavirus (Multiple Strains: Sudan and Zaire included), and/or Marburg Virus.

Test name as listed in Lab Web Portal: Warrior Panel

Type of test: Biofire Warrior Panel

Approval for this test is required: This test requires approval from the Infectious Disease Epidemiology Unit (Line: 1-888-996-9104). After approval, the sentinel site must contact WPHL (307-777-7431) to notify the Preparedness Laboratory of the specimen and to discuss this test.

Specimen Requirements:

- Whole blood collected in a purple top EDTA tube. **Do NOT centrifuge** sample.
- Tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must be labeled as "Preparedness Laboratory Sample."
- Ship Ebolavirus and Marburg specimens according to Category A Infectious Disease Packaging (Class 6.2) requirements. Trackable Shipping is required for specimens sent through a third party (FedEx). Ensure specimens are shipped by personnel that are properly trained in shipping Category A infectious substances.
- Ship suspected *Coxiella burnetii* specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C

Turnaround Time:

- Presumptive and Negative results will be reported within 24 hours receiving the sample.

WPHL Reporting and Referrals:

- If any Positive result is obtained from this panel, WPHL may refer the sample to another LRN laboratory or the CDC for further testing and confirmation.
- If any Positive result is obtained from this panel, additional samples may be requested.
- If Ebola Virus is suspected, Reflex Testing may be required. Additional sample types may be requested for further testing.

Brucella Species

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- *B. melitensis*, *B. abortus*, *B. suis*, *B. canis*

Test name as listed in Lab Web Portal: Brucella spp. Panel

Type of test: Qualitative real-time PCR, Culture-based tests

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Choose from one of the four options: Bacterial Culture Isolate(s) on a Blood Agar Plate (BAP), Blood Slant, Chocolate Agar Plate, **-OR-** Chocolate Slant. All of these options should be submitted without additives or antibiotics.
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must state "Preparedness Laboratory Sample."
- Ship suspected *Brucella* species specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: The WPHL Preparedness Lab can test other sample types; please contact the WPHL Preparedness Laboratory to discuss alternative sample types: 307-777-7431.

Transport Temperature:

- Ambient: 15°C to 25°C

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of receiving the sample. Plates may be held for a minimum of five days prior to final reporting.

WPHL Reporting and Referrals:

- WPHL will report a Presumptive or Negative result to the submitter. WPHL will also refer all Presumptive isolates to an LRN Laboratory for confirmation. Negative isolates may be referred to WPHL bacteriology for identification upon submitter or epidemiology request.

Do not order this organism as a Bacterial ID

Burkholderia Species

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- *B. mallei* and/or *B. pseudomallei*

Test name as listed in Lab Web Portal: Burkholderia spp. Panel

Type of test: Qualitative real-time PCR, Culture-based tests

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Choose from one of the four options: Bacterial Culture Isolate(s) on a Blood Agar Plate (BAP), Blood Slant, Chocolate Agar Plate, **-OR-** Chocolate Slant. All of these options should be submitted without additives or antibiotics.
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must state "Preparedness Laboratory Sample."
- Ship suspected *Burkholderia* species specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: The WPHL Preparedness Lab can test other sample types; please contact the WPHL Preparedness Laboratory to discuss alternative sample types: 307-777-7431.

Transport Temperature:

- Ambient: 15°C to 25°C

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of receiving the sample. Plates may be held for a minimum of five days prior to final reporting.

WPHL Reporting and Referrals:

- WPHL will report a Suspected, Presumptive, Confirmed, or Negative result to the submitter. WPHL will also refer all Suspected, Presumptive, and Confirmed isolates to the CDC. Negative isolates may be referred to bacteriology for identification upon submitter or epidemiology request.

Do not order this organism as a Bacterial ID

Francisella tularensis

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Francisella tularensis Panel

Type of test: Qualitative real-time PCR, Direct Fluorescent Antibody Test (DFA), Culture-based tests

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Bacterial Culture Isolate(s) on Chocolate Agar Plate **-OR-** Chocolate Slant with no additives/antibiotics.
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must state "Preparedness Laboratory Sample."
- Ship suspected *Francisella tularensis* specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: The WPHL Preparedness Lab can test other sample types; please contact the WPHL Preparedness Laboratory to discuss alternative sample types: 307-777-7431.

Transport Temperature:

- Ambient: 15°C to 25°C

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of receiving the sample. Plates may be held for a minimum of five days prior to final reporting.

WPHL Reporting and Referral:

- WPHL will report a Presumptive, Confirmed, or Negative result to the provider. A referral may also be requested by the CDC for further characterization. Negative isolates may be referred to bacteriology for identification upon submitter or epidemiology request.

Do not order this organism as a Bacterial ID

Highly Pathogenic Avian Influenza (HPAI)

Cost of Test: \$0.00, waived

Analytes evaluated in this test:

- Influenza A (H5)

Test name as listed in Lab Web Portal: HPAI (H5N1)

Type of Test: Real-time RT-PCR

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

For patients with respiratory illness without conjunctivitis, two specimen types are preferred:

- 1 nasopharyngeal (NP) swab in VTM or UTM **-AND-**;
- 1 nasal swab (NS) **-AND-** 1 oropharyngeal (OP) swab placed into a single VTM or UTM vial (two collection swabs combined into one transport medium).
- Total specimens: 3 swabs in 2 collection containers. The minimum volume required for each sample is 1mL VTM or UTM.

For patients with conjunctivitis (with or without respiratory symptoms), two specimen types are preferred:

- 1 nasopharyngeal (NP) swab in VTM or UTM **-AND-**;
- 1 Conjunctival swab (CS) in VTM or UTM
- Total specimens: 2 swabs in 2 collection containers. The minimum volume required for each sample is 1mL VTM or UTM.
- For severely ill individuals, multiple specimens from different sites should be collected to increase the potential for virus detection.
- Swab specimens should be with a synthetic tip and an aluminum or plastic shaft. Calcium alginate swabs and swabs with wooden shafts are unacceptable.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for no more than 3 days)
- Frozen: ≤-70°C (dry ice for no more than 7 days)

Turn-around Time:

- NP, OP, and Nasal specimen results will be released ≤24 hours. Conjunctival specimen results will not be provided directly to providers and will be released for epidemiological use only.

WPHL Reporting and Referrals:

- WPHL may refer samples to the CDC for surveillance purposes.

Middle East Respiratory Syndrome (MERS) Coronavirus

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: MERS (Novel Coronavirus 2012)

Type of test: Qualitative real-time RT-PCR

Approval for this test is required: This test requires approval from the State Health Officer, contact the Infectious Disease Epidemiology Unit (Line: 1-888-996-9104). After approval, the sentinel site must contact WPHL (307-777-7431) to notify the Preparedness Laboratory of the specimen and to discuss this test.

Specimen Requirements:

- A flocked, flexible-shaft nasopharyngeal swab or oropharyngeal swab in a viral transport medium (VTM). Sputum and Bronchial Aspirate/Wash specimens are also acceptable with a minimum collection requirement of 3mL and must be transported in a sterile, leak-proof container.
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must state "Preparedness Laboratory Sample."
- Ship suspected MERS Coronavirus specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Transport Temperature:

- Refrigerated: 2°C to 8°C (for 3 days)
- Frozen: ≤-70°C, Ship on dry ice (If specimen shipping is delayed for more than 3 days)

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of testing the sample.

WPHL Reporting and Referral:

- WPHL will report an Equivocal, Presumptive, or Negative result to the provider. WPHL will also refer the specimens to the CDC for confirmatory testing.

Orthopoxvirus

Cost of Test: \$0.00, waived

Analytes evaluated in this test: Variola and Non-Variola Orthopoxvirus
(Cowpox, Camelpox, Mpox, etc.)

Test name as listed in Lab Web Portal: Smallpox Panel

Type of test: Qualitative real-time PCR

Approval for this test is required: Contact Infectious Disease Epidemiology Unit and Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Collect two swabs per lesion, place in separate sterile containers (i.e., conical tube or urine cup), and break off applicator ends if possible.
- Seal all plates or tubes with parafilm or tape. Label the outermost container lid: "WPHL Preparedness Laboratory Sample."
- Ship Mpox specimens according to Category A Infectious Disease Packaging (Class 6.2) requirements. Trackable Shipping is required for specimens sent through a third party (FedEx). Ensure specimens are shipped by personnel that are properly trained in shipping Category A infectious substances.
- Ship moderate to low-risk Orthopox specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: Contact WPHL for further information: 307-777-7431.

Transport Temperature:

- Refrigerated: 2°C to 8°C (within 5 days)
- Frozen: ≤-20°C (within 5 days on dry ice)

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of testing the sample.

WPHL Reporting and Referrals:

- Reporting for this panel varies; WPHL may refer the duplicate swab to the CDC for confirmation. WPHL will communicate with submitters regarding the results of the panel.

Yersinia pestis

Cost of Test: \$0.00, waived

Test name as listed in Lab Web Portal: Yersinia pestis Panel (Plague)

Type of test: Qualitative real-time PCR, Culture-based tests

Approval for this test is required: Contact Infectious Disease Epidemiology Unit or Wyoming Public Health Laboratory (WHD 24/7: 1-888-996-9104) prior to submission of sample.

Specimen Requirements:

- Choose from one of the four options: Bacterial Culture Isolate(s) on a Blood Agar Plate (BAP), Blood Slant, Chocolate Agar Plate, **-OR-** Chocolate Slant. All of these options should be submitted without additives or antibiotics.
- All plates or tubes must be sealed with parafilm or taped shut prior to submission. The lid of the outermost container must state "Preparedness Laboratory Sample."
- Ship suspected *Yersinia pestis* specimens according to Category B Infectious Disease Packaging (Class 6.2) requirements. Ensure specimens are shipped by personnel that are properly trained in shipping Category B infectious substances.

Notes: The WPHL Preparedness Lab can test other sample types, for all other sample types, please contact the WPHL Preparedness Laboratory.

Transport Temperature:

- Ambient: 15°C to 25°C

Turnaround Time:

- Presumptive and Negative results will be reported within one business day of receiving the sample. Plates may be held for a minimum of five days prior to final reporting.

WPHL Reporting and Referrals:

- WPHL will report a Presumptive, Confirmatory, or Negative result to the submitter. A referral may also be requested by the CDC for further characterization. Negative isolates may be referred to bacteriology for identification upon submitter or epidemiology request.

Do not order this organism as a Bacterial ID