2015

# CDC INFECTIOUS DISEASES LABORATORY TEST DIRECTORY

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DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

CDC

CENTERS FOR DISEASE CONTROL AND PREVENTION™

This document was created under National Center for Emerging and Zoonotic Diseases/ Office of Infectious Diseases (NCEZID/OD). The printed version of CDC's Infectious Diseases Laboratory Test Directory contains information that is current as of August 19th, 2015. All information contained herein is subject to change.

For the most current test information, please view the CDC's Infectious Diseases Laboratory Test Directory on: http://www.cdc.gov/laboratory/specimen-submission/list.html.

# Test Order

## *Acanthamoeba* Molecular Detection

## CDC-10471

| | |
|---|---|
| Synonym(s) | Free-living ameba, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | For *Acanthamoeba* and *Balamuthia* molecular detection, tissue is the preferred specimen type; however, these amoebae can occasionally be detected in cerebrospinal fluid (CSF). For *Naegleria fowleri* molecular detection, CSF is the preferred specimen type. |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. In addition to two patient identifiers (sex, date of birth, name, etc.), provide specimen type and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Conventional PCR, Real Time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Formalin fixed specimens are not suitable for molecular studies |
| Additional Information | None |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov |

# Test Order

## *Actinomyces* – Anaerobic ID

## CDC-10483

| | |
|---|---|
| Synonym(s) | Anaerobe ID, Bacterial Identification, Anaerobe |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Anaerobic bacteria from clinically relevant sources, pure culture isolate in suitable anaerobic transport medium (e.g., Chopped Meat Glucose Broth). Prior approval from laboratory required for other sample/specimen types. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store anaerobically |
| Transport Medium | Pure culture isolate in Chopped Meat Glucose broth, thioglycolate broth or frozen in TSB plus glycerol |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries, as an etiologic agent.<br><br>Frozen specimen should be shipped on dry ice<br>Specimen stored at room temperature should be shipped at room temperature |
| Methodology | 16s Sequencing, MALDI-TOF, Phenotypic Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | Specimens from respiratory, vaginal, and fecal sources are not acceptable |
| Additional Information | None |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Kamile Rasheed<br>(404) 639-3247<br>jkr1@cdc.gov |

# Test Order

## *Actinomycetes*-Aerobic -ID

## CDC-10148

| | |
|---|---|
| Synonym(s) | *Nocardia*, *Streptomyces* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately. |
| Transport Medium | Suitable agar slant medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary culture based on specimen type, 16S sequence based identification, MALDI-TOF |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Actinomycetes*-Aerobic -ID and AST

## CDC-10149

| | |
|---|---|
| Synonym(s) | Actinos |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | AST by broth microdilution, Primary Culture based on specimen type, 16S sequence based identification, MALDI-TOF |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Adenovirus Molecular Detection and Typing

## CDC-10170

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov**<br>**Kamili, Shifaq, (404) 639-2799, sgk5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Upper or lower respiratory tract specimens, eye swabs, stool, serum, blood or plasma, pure culture isolate |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate all specimens promptly after collection. If specimens can be shipped to CDC within 72 hours of collection, they should be kept refrigerated at 4°C and shipped on gel ice-packs. Freezing should be avoided if possible, as this will reduce virus infectivity. Specimens for virus culture should not be frozen at -20° C. If specimens must be held for >72 hours, they should be promptly frozen at -70°C and shipped on dry ice. Liquid specimens should be aliquoted into properly labeled, leak-proof, unbreakable screw cap vials. Samples should be collected and processed in a manner that prevents cross-contamination between specimens, including changing gloves between specimens. |
| Transport Medium | Swabs may be shipped in commercial viral transport media |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. |
| Additional Information | None |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## Alkhurma Identification

## CDC-10274

| | |
|---|---|
| Synonym(s) | AHFV |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen, warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Alkhurma Serology

## CDC-10285

| | |
|---|---|
| Synonym(s) | AHFV |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Ameba Identification (*Acanthamoeba*, *Balamuthia*, *Naegleria*)

## CDC-10286

| | |
|---|---|
| Synonym(s) | Free-living ameba, *Acanthamoeba*, *Balamuthia*, *Naegleria fowleri* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please provide the following information: history of present illness, exposure history, past medical history, treatment history, CSF results, imaging results**<br><br>**If images are available please upload to: www.cdc.gov/dpdx** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Fresh, unfixed tissue and Paraffin-embedded and formalin-fixed tissue. cerebrospinal fluid (CSF), biopsy specimen, deep corneal scrapings, and ocular fluids are also acceptable. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | CSF and fresh, unfixed tissue should be kept at ambient temperatures. Paraffin-embedded and formalin-fixed tissue should be kept at room temperature. Send a few H&E-stained slides and a few (about 6) unstained slides for IHC test, or Paraffin-embedded tissue block.<br><br>Unfixed deep scraping and biopsy materials for identification of free-living amoeba are usually very small and may dry if they are not stored in proper fluid such as "amoeba saline." These specimens should be transported to the laboratory within 24 hours. |
| Transport Medium | Care should be taken to pack glass slides securely, as they can be damaged in shipment if not packed in a crush-proof container. For deep scraping and biopsy materials please transport in ameba saline solution. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. In addition to two patient identifiers (sex, date of birth, name, etc.), provide specimen type and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. Please contact laboratory prior to shipping any specimen and include unit 53 on the outside of package.<br><br>Ship all fresh specimens such as CSF, tissue (e.g., brain, lungs, skin) and all deep scraping and biopsy material, contact lens solutions etc. within 24 hours. Fresh, unfixed specimens (i.e., CSF and tissue) should be sent at ambient temperature by overnight priority mail. Please ship these specimens separately from other chilled or frozen samples being shipped. The free-living amebae are heat-loving and can be killed by cold temperatures (either refrigeration or freezing).<br><br>If specimen has been previously frozen or preserved in formalin, please send these specimens by overnight priority mail on ice packs (if tissue is frozen) (do NOT ship on dry ice) and ambient temperature if the tissue is fixed in formalin. |
| Methodology | Polymerase Chain Reaction (PCR), Indirect Immunofluorescence (IIF), Immunohistochemical (IHC) staining plus microscopy, Microscopy |
| Turnaround Time | 7 Days |
| Interferences & Limitations | If the specimen (i.e., CSF or tissue) has been previously frozen or is preserved in formalin, CDC will still accept the specimen but the full range of testing methodologies might not be available. |
| Additional Information | Include the address of sender and physician contact information with the |

| | | |
|---|---|---|
| | specimen.<br><br>For deep scraping and biopsy materials please provide the following information to the laboratorians: patient name (first, last and middle initials), age & date of birth, sex, date specimen collected, Specimen source (cornea, vitreous fluid), specimen type (deep scraping, biopsy, vitreous fluid), suspected infection (keratitis, conjunctivitis, endophthalmitis), transport medium used.<br><br>Ameba saline, 1X stock:<br>Sodium chloride (NaCl) 0.120g<br>Magnesium sulfate (MgSO4.7HOH) 0.004 g<br>Sodium phosphate, dibasic (Na2HPO4) 0.142g<br>Potassium phosphate, monobasic (KH2P O4) 0.136g<br>Calcium chloride (CaCL2.2HOH) 0.004g<br>Double distilled water to 1000.0 mL | |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov | If you are calling outside of regular business hours, please call the CDC Emergency Operations Center (EOC) (770) 488-7100 |

# Test Order

## Ameba Serology (*Acanthamoeba*, *Balamuthia*, *Naegleria*)

## CDC-10287

| | |
|---|---|
| Synonym(s) | Free-living ameba, *Acanthamoeba*, *Balamuthia*, *Naegleria fowleri* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please provide the following information: history of present illness, exposure history, past medical history, treatment history, CSF results, imaging results**<br><br>**If images are available please upload to: www.cdc.gov/dpdx** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Sera (two specimen taken 2 weeks apart) |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Serum specimens can be collected from the patient in a red-top tube (plain vacuum tube with no additive) or a serum-separator tube (tiger top) tube (red/gray speckled top with gel in the tube). Please centrifuge the specimen, and if possible, send serum only. If using a plain red-top tube, you must separate the serum before shipping and send the serum only. Should be kept refrigerated or frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. In addition to two patient identifiers (sex, date of birth, name, etc.), provide specimen type and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. Please contact laboratory prior to shipping any specimen and include unit 53 on the outside of package.<br><br>Serum samples should be shipped refrigerated or frozen and packed with cold packs |
| Methodology | Indirect Immunofluorescence Antibody (IFA) assay |
| Turnaround Time | 14 Days |
| Interferences & Limitations | None |
| Additional Information | Include the address of sender and physician contact information with the specimen |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov<br><br>If you are calling outside of regular business hours, please call the CDC Emergency Operations Center (EOC) (770) 488-7100 |

# Test Order

## Ameba Special Study

## CDC-10288

| | | |
|---|---|---|
| Synonym(s) | None | |
| **Pre-Approval Needed** | **Cope, Jennifer, (404) 718-4878, bjt9@cdc.gov**<br>**Ali, Ibne, (404) 718-4157, xzn5@cdc.gov** | |
| **Supplemental Information Required** | **None** | |
| **Supplemental Form** | **None** | |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics | |
| Acceptable Sample/ Specimen Type for Testing | To be determined | |
| Minimum Volume Required | To be determined | |
| Storage & Preservation of Specimen Prior to Shipping | To be determined | |
| Transport Medium | To be determined | |
| Specimen Labeling | To be determined | |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined | |
| Methodology | | |
| Turnaround Time | | |
| Interferences & Limitations | To be determined | |
| Additional Information | To be determined | |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov | If you are calling outside of regular business hours, please call the CDC Emergency Operations Center (EOC) (770) 488-7100 |

# Test Order

## Amebiasis (*Entamoeba histolytica*) Enzyme Immunoassay

## CDC-10461

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **THIS TEST IS NO LONGER PERFORMED AT CDC** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | |
| Minimum Volume Required | |
| Storage & Preservation of Specimen Prior to Shipping | |
| Transport Medium | |
| Specimen Labeling | |
| Shipping Instructions which Include Specimen Handling Requirements | |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | |
| Additional Information | |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Anaerobic Bacteria Identification

## CDC-10227

| | |
|---|---|
| Synonym(s) | Anaerobe ID, Bacterial Identification, Anaerobe |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Anaerobic bacteria from clinically relevant sources, pure culture isolate in suitable anaerobic transport medium (e.g., Chopped Meat Glucose Broth). Prior approval from laboratory required for other sample/specimen types. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store anaerobically |
| Transport Medium | Pure culture isolate in Chopped Meat Glucose broth, thioglycolate broth or frozen in TSB plus glycerol |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries, as an etiologic agent.<br><br>Frozen specimen should be shipped on dry ice<br>Specimen stored at room temperature should be shipped at room temperature |
| Methodology | 16S Sequencing, MALDI-TOF, Phenotypic Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | Specimen from respiratory, vaginal, and fecal sources are not acceptable |
| Additional Information | See separate test order for *C. difficile* |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Kamile Rasheed<br>(404) 639-3247<br>jkr1@cdc.gov |

# Test Order

## *Anaplasma* and *Ehrlichia* Molecular Detection

## CDC-10290

| | |
|---|---|
| Synonym(s) | Human granulocytic anaplasmosis and Human monocytic ehrlichiosis, HGE |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Acute samples only, anticoagulated whole blood collected in Ethylenediaminetetraacetic acid (EDTA) treated tubes preferred; serum; fresh tissue biopsy |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Ethylenediaminetetraacetic acid (EDTA) blood tubes for blood; tissue in a sample collection tube |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Real Time Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Hemolysis in whole blood specimen will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. If a specimen is drawn at convalescence it will reduce the chance of the target organism being present in blood. Avoid collection of blood specimen in heparin tubes. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Anaplasma* and *Ehrlichia* Special Study

## CDC-10291

| | |
|---|---|
| Synonym(s) | Human granulocytic anaplasmosis and Human monocytic ehrlichiosis, HGE |
| **Pre-Approval Needed** | **Kato, Cecilia, (404) 639-1075, ckato@cdc.gov**<br>**Paddock, Christopher, (404) 639-1309, cdp9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | Molecular detection, Serology, Culture, Immunohistochemistry (IHC), Other |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Anaplasma* Serology

## CDC-10292

| | |
|---|---|
| Synonym(s) | Human granulocytic anaplasmosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Indirect Fluorescence Assay (IFA) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact laboratory prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Angiostrongylus cantonensis* Molecular Detection

## CDC-10472

| | |
|---|---|
| Synonym(s) | Angiostrongyliasis, Rat lungworm, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Cerebrospinal fluid (CSF); tissue |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen on wet ice (cold pack) as an etiologic agent. |
| Methodology | Real Time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Formalin fixed specimens are not suitable for molecular studies |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Maniphet Xayavong<br>(404) 718-4125<br>max1@cdc.gov |

# Test Order

## Antimicrobial Susceptibility Testing - Bacterial

## CDC-10223

| | |
|---|---|
| Synonym(s) | AST, Sensitivity, MIC testing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Confirmation of unusual resistance is required before sending specimen for testing; please specify antibacterial agent of interest and provide previous results and testing method** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on suitable agar medium |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep refrigerated if isolate cannot be shipped immediately. For fastidious organisms (e.g. *Neisseria meningitidis*), store at room temperature. |
| Transport Medium | Pure culture isolate on suitable agar medium or frozen in TSB plus glycerol |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday overnight to avoid weekend deliveries, as an etiologic agent.<br><br>Refrigerated specimen should be shipped on ice packs<br>Specimen stored at room temperature should be shipped at room temperature |
| Methodology | Broth Microdilution, Disk Diffusion, Additional Phenotypic Testing, Molecular detection of resistance markers |
| Turnaround Time | 18 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Kamile Rasheed<br>(404) 639-3247<br>JRasheed@cdc.gov |

# Test Order

## Arbovirus Isolation and Identification

## CDC-10281

| | |
|---|---|
| Synonym(s) | Arbo-Isolation, Chikungunya |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, cerebrospinal fluid (CSF), and fresh frozen tissue specimen |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept at 4°C or colder |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br><br>Ship to:<br>Centers for Disease Control & Prevention<br>3156 Rampart Road (CSU Foothills Campus)<br>Fort Collins, Colorado 80521 |
| Methodology | Isolation in cell culture |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Robert Lanciotti<br>(970) 221-6440<br>rsl2@cdc.gov |

# Test Order

## Arbovirus Molecular Detection

## CDC-10280

| | |
|---|---|
| Synonym(s) | Arbo-RT-PCR, Chikungunya |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, cerebrospinal fluid (CSF), and fresh frozen tissue specimen |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept at 4°C or colder |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br><br>Ship to:<br>Centers for Disease Control & Prevention<br>3156 Rampart Road (CSU Foothills Campus)<br>Fort Collins, Colorado 80521 |
| Methodology | RT-Polymerase Chain Reaction (PCR) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Hemolysis can affect the test results |
| Additional Information | None |
| CDC Points of Contact | Robert Lanciotti<br>(970) 221-6440<br>rsl2@cdc.gov |

# Test Order

## Arbovirus Neutralization Antibody

## CDC-10283

| | |
|---|---|
| Synonym(s) | Arbo-PRNT, Chikungunya |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and cerebrospinal fluid (CSF) |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept at 4°C or colder |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br><br>Ship to:<br>Centers for Disease Control & Prevention<br>3156 Rampart Road (CSU Foothills Campus)<br>Fort Collins, Colorado 80521 |
| Methodology | Plaque reduction neutralization |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Robert Lanciotti<br>(970) 221-6440<br>rsl2@cdc.gov |

# Test Order

## Arbovirus Serology

## CDC-10282

| | |
|---|---|
| Synonym(s) | Arbo-Serology, Chikungunya |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and cerebrospinal fluid (CSF) |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept at 4°C or colder |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br><br>Ship to:<br>Centers for Disease Control & Prevention<br>3156 Rampart Road (CSU Foothills Campus)<br>Fort Collins, Colorado 80521 |
| Methodology | ELISA, MIA |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Robert Lanciotti<br>(970) 221-6440<br>rsl2@cdc.gov |

# Test Order

## Arbovirus Special Study

## CDC-10284

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Lanciotti, Robert, (970) 221-6440, rsl2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Robert Lanciotti<br>(970) 221-6440<br>rsl2@cdc.gov |

# Test Order

## Arenavirus (New World) - Serology

## CDC-10484

| | |
|---|---|
| Synonym(s) | Junin virus, Machupo virus, Guanarito virus, Chapare virus, Sabia virus serology |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood, Serum |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient Name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | None |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## *Arenavirus* (New World) Identification

## CDC-10293

| | |
|---|---|
| Synonym(s) | New World *Arenavirus,* South American hemorrhagic fever viruses |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## *Arenavirus* (Old World) Identification

## CDC-10294

| | |
|---|---|
| Synonym(s) | Old World *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## *Babesia* Molecular Detection

## CDC-10473

| | |
|---|---|
| Synonym(s) | Babesiosis; *Babesia microti*; *Babesia duncani,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Collect a 1-5 ml blood sample in Vacutainer® EDTA tubes prior to anti-parasitic therapy and ship at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen on wet ice (cold pack) as an etiologic agent. |
| Methodology | Conventional PCR, Real Time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Maniphet Xayavong<br>(404) 718-4125<br>max1@cdc.gov |

# Test Order

## Babesiosis Indirect Fluorescent Antibody Test

## CDC-10456

| | |
|---|---|
| Synonym(s) | *Babesia microti*; *Babesia duncani*; *Babesia divergens,* babesiosis, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors (ticks, transfusion); clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and plasma |
| Minimum Volume Required | 0.5mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Indirect Fluorescent Antibody assay, Antibody detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## *Bacillus anthracis* Detection in Clinical Specimens

## CDC-10204

| | |
|---|---|
| Synonym(s) | Anthrax PCR |
| **Pre-Approval Needed** | **Bacterial Special Pathogens Branch (CDC), , (404) 639-1711, bzb@cdc.gov Alternate Phone, , (404) 772-5131,** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | http://www.cdc.gov/anthrax/labs/recommended_specimen.html |
| Minimum Volume Required | 100 uL - see Additional Information |
| Storage & Preservation of Specimen Prior to Shipping | Info on specimens, storage and shipping can be found at: http://www.cdc.gov/anthrax/labs/recommended_specimen.html |
| Transport Medium | Dependent on specimen type submitted. Info on specimens, storage, and shipping can be found at: http://www.cdc.gov/anthrax/labs/recommended_specimen.html |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Info on appropriate specimens and shipping can be found at: http://www.cdc.gov/anthrax/labs/recommended_specimen.html<br><br>Most samples can be sent 2-8 ◦ C. Fresh tissue should be sent frozen and fixed tissue can be sent at room temperature. |
| Methodology | Culture, PCR, Immunohistochemistry (IHC), Toxin detection |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Varies depending on tests used. Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin). Tissues for IHC should be formalin fixed. |
| Additional Information | Turnaround time will vary depending on methods selected for detection at CDC. Some methods may require up to 1 week.<br><br>Minimal volume: limited testing can be done with 100 ul, however 0.5- 1 ml is optimal to increase number of tests which can be performed and increase assay sensitivity. |
| CDC Points of Contact | Alex Hoffmaster<br>(404) 639-0852<br>amh9@cdc.gov<br>Chung Marston<br>(404) 639-4057<br>cdk5@cdc.gov |

# Test Order

## *Bacillus anthracis* Genotyping and AST

## CDC-10203

| | |
|---|---|
| Synonym(s) | Anthrax, Anthrax Gamma phage, Anthrax PCR, Anthrax typing |
| **Pre-Approval Needed** | **Bacterial Special Pathogens Branch (CDC), , (404) 639-1711, bzb@cdc.gov** |
| **Supplemental Information Required** | **Select Agent Form 2 required for submission of all confirmed Select Agents.** |
| **Supplemental Form** | **http://www.selectagents.gov/forms.html** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | *B. anthracis* isolates |
| Minimum Volume Required | N/A |
| Storage & Preservation of Specimen Prior to Shipping | Store isolates at room temperature |
| Transport Medium | Appropriate microbiological media for *Bacillus* |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Room temperature<br><br>Confirmed select agents need Form 2 approval by the Select Agent program prior to shipping. The Form 2 can be found at http://www.selectagents.gov/forms.html |
| Methodology | Genotyping (i.e., MLVA and genome sequence), Broth Microdilution, Rapid Antimicrobial Susceptibility Test (AST) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | Rapid AST turnaround is 12-24 h.<br>Genotyping and broth microdilution is ~1 week.<br>Note: more extensive characterization by whole genome sequencing may take longer. Times may be shorter in public health emergencies.<br><br>Link to our website:<br>http://www.cdc.gov/anthrax/labs/recommended_specimen.html |
| CDC Points of Contact | Chung Marston<br>(404) 639-4057<br>cdk5@cdc.gov<br>David Lonsway<br>(404) 639-2825<br>dul7@cdc.gov |

# Test Order

## *Bacillus anthracis* Serology

## CDC-10196

| | |
|---|---|
| Synonym(s) | Anthrax ELISA |
| **Pre-Approval Needed** | **Bacterial Special Pathogens Branch (CDC), , (404) 639-1711, bzb@cdc.gov Alternate Phone, , (404) 772-5131,** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum (acute and convalescent required) |
| Minimum Volume Required | 250 uL |
| Storage & Preservation of Specimen Prior to Shipping | Separate serum from clot; sera should be frozen immediately following separation and stored frozen at -20°C or colder, and should be shipped frozen on dry ice to CDC, in appropriately labeled plastic screw cap vials. For more information on specimen processing and storage, see link in "Additional Information". |
| Transport Medium | Not applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice. See additional info at http://www.cdc.gov/anthrax/labs/recommended_specimen.html . |
| Methodology | Antibody detection by ELISA and TNA |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Requires acute and convalescent serum for analysis |
| Additional Information | Turnaround time ranges from 1-2 weeks. See additional info at http://www.cdc.gov/anthrax/labs/recommended_specimen.html |
| CDC Points of Contact | Chung Marston<br>(404) 639-4057<br>cdk5@cdc.gov<br>Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov |

# Test Order

*Bacillus anthracis* Study

CDC-10205

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Hoffmaster, Alex, (404) 639-0852, amh9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Alex Hoffmaster<br>(404) 639-0852<br>amh9@cdc.gov |

# Test Order

## *Bacillus cereus* Detection - Foodborne Outbreak

## CDC-10104

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov<br>Gomez, Gerardo, (404) 639-0537, goe4@cdc.gov** |
| **Supplemental Information Required** | **Only specimens from foodborne outbreaks accepted. Consult with EDLB contact before sending specimens. Provide preliminary results if available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates, food, stool. Only specimens from foodborne outbreaks accepted. Consult with Dr. Talkington before sending specimens. |
| Minimum Volume Required | 25 g (food) and 10g (stool) |
| Storage & Preservation of Specimen Prior to Shipping | Food and stool should be maintained at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Gerardo Gomez (goe4@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Toxin Detection in food, Culture, PCR |
| Turnaround Time | 2 Months |
| Interferences & Limitations | None |
| Additional Information | Direct toxin detection requires food samples |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Gerardo Gomez<br>(404) 639-0537<br>goe4@cdc.gov |

# Test Order

## *Bacillus cereus* Genotyping

## CDC-10206

| | |
|---|---|
| Synonym(s) | *Bacillus* MLST |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Any medium can be submitted, but preferably agar slants |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday overnight to avoid weekend deliveries<br><br>Agar slants need to be shipped at room temperature |
| Methodology | Multilocus sequence typing (MLST) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | Testing can be done on *B. cereus* and *B. thuringiensis* |
| CDC Points of Contact | Alex Hoffmaster<br>(404) 639-0852<br>amh9@cdc.gov<br>Jay Gee<br>(404) 639-4936<br>xzg4@cdc.gov |

# Test Order

*Bacillus* species ID (Not *B. anthracis*)

CDC-10142

| | |
|---|---|
| Synonym(s) | *Bacillus* Identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary culture based on specimen type, 16S sequence based identification, MALDI-TOF |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Bacterial ID from Clinical Specimen (16S rRNA PCR)

## CDC-10146

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **McQuiston, John, (404) 639-0270, zje8@cdc.gov<br>Whitney, Anne, (404) 639-1374, amw0@cdc.gov** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Primary specimens with prior approval |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Bacterial ID of Unknown Isolate (Not Strict Anaerobe)

## CDC-10145

| | |
|---|---|
| Synonym(s) | Bacterial Identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Balamuthia* Molecular Detection

## CDC-10474

| | |
|---|---|
| Synonym(s) | Free-living ameba, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | For *Acanthamoeba* and *Balamuthia* molecular detection, tissue is the preferred specimen type; however, these amoebae can occasionally be detected in cerebrospinal fluid (CSF). For *Naegleria fowleri* molecular detection, CSF is the preferred specimen type. |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. In addition to two patient identifiers (sex, date of birth, name, etc.), provide specimen type and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Real-time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Formalin fixed specimens are not suitable for molecular studies |
| Additional Information | None |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov |

# Test Order

## *Bartonella henselae*/*B. quintana* Indirect Fluorescent Antibody (IFA) test

## CDC-10486

| | |
|---|---|
| Synonym(s) | *B. henselae*/cat scratch disease, *B. quintana*/trench fever |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please provide submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, date of symptom onset, sample collection date, and clinical information including symptoms and type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Sera may be stored at 2°-8°C for up to 14 days. If testing is delayed for a longer period, serum samples may be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimen identifier and patient name |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Indirect Fluorescent Antibody (IFA) |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Samples with hemolysis, increased lipemia or microbial growth may interfere with test results |
| Additional Information | Clinical information including symptoms and date of onset must be included; specimens without this accompanying information will not be tested. |
| CDC Points of Contact | Jeannine Peterson<br>(970) 266-3524<br>nzp0@cdc.gov<br>Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov |

# Test Order

## *Bartonella* Molecular Identification

## CDC-10295

| | |
|---|---|
| Synonym(s) | Cat scratch fever, *B. henselae,* Trench fever, *B. quintana,* Oroya fever, *B. bacilliformis* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:<br>-Symptom onset date<br>-Sample collection date<br>-Type of infection<br>-Status of illness<br>Recommended:<br>-Travel history<br>-Exposure history<br>-Therapeutic agents<br>-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Acute samples only, anticoagulated whole blood collected in Ethylenediaminetetraacetic acid (EDTA) treated tubes preferred; serum; fresh tissue biopsy |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Ethylenediaminetetraacetic acid (EDTA) blood tubes for blood; tissue in a sample collection tube |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Hemolysis in whole blood specimen will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. If a specimen is drawn at convalescence it will reduce the chance of the target organism being present in blood. Avoid collection of blood specimen in heparin tubes. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

*Bartonella* Special Study

CDC-10297

| | |
|---|---|
| Synonym(s) | Cat scratch fever, *B. henselae,* Trench fever, *B. quintana*, Oroya fever, *B. bacilliformis* |
| **Pre-Approval Needed** | **Schriefer, Marty, (970) 221-6479, mms7@cdc.gov**<br>**Peterson, Jeannine, (970) 266-3534, nzp0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | Molecular detection, Serology, Culture, Immunohistochemistry (IHC), Other |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Peterson<br>(970) 266-3534<br>nzp0@cdc.gov |

# Test Order

## Baylisascariasis Immunoblot

## CDC-10457

| | |
|---|---|
| Synonym(s) | Baylisascariasis, Raccoon roundworm, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors (raccoon) clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma; Cerebrospinal fluid (CSF) |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Immunoblot, Western Blot, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Biodefense R&D Study

## CDC-10487

| | |
|---|---|
| Synonym(s) | Biodefense Research and Development Laboratory Study |
| **Pre-Approval Needed** | **Weigel, Linda, (404) 639-1497, lew9@cdc.gov**<br>**Sue, David, (404) 639-4027, btx6@cdc.gov** |
| **Supplemental Information Required** | **For isolates from human specimens, prior approval is required. Consult with the lab for details.**<br><br>**Select Agent Form 2 required for submission of all confirmed Select Agents. The Form 2 can be found at http://www.selectagents.gov/forms.html** |
| **Supplemental Form** | **http://www.selectagents.gov/forms.html** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates on agar plate or slant, consult with lab for details. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Consult with lab for details |
| Transport Medium | Pure culture isolates (only) on sheep blood or Mueller-Hinton agar |
| Specimen Labeling | Test is subject to CLIA regulations and requires two patient identifiers on the specimen container and on the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Select agents that have been identified need form 2 approval prior to shipping. Form 2 may be found at: http://www.selectagents.gov/forms.html |
| Methodology | Modified Broth Microdilution |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Isolates from human specimens may be tested only under Emergency Use Authorization. |
| Additional Information | Turnaround time can vary depending on age/purity of isolate received |
| CDC Points of Contact | Linda Weigel<br>(404) 639-1497<br>lew9@cdc.gov<br>David Sue<br>(404) 639-4027<br>btx6@cdc.gov |

# Test Order

Biothreat Study

CDC-10432

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Bowzard, Brad, (404) 639-3626, jbowzard@cdc.gov<br>Sue, David, (404) 639-4027, dsue@cdc.gov** |
| **Supplemental Information Required** | **Please contact Dr. Brad Bowzard at 404 639-3626 or jbowzard@cdc.gov, for the required supplemental form and packaging and shipping requirements.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Brad Bowzard<br>(404) 639-3626<br>jbowzard@cdc.gov<br>David Sue<br>(404) 639-4027<br>dsue@cdc.gov |

# Test Order

## Blood Disorders Coagulation Study

## CDC-10271

| | |
|---|---|
| Synonym(s) | Coag |
| **Pre-Approval Needed** | **Rice, Anne, (404) 639-4434, amr8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Anne Rice<br>(404) 639-4434<br>amr8@cdc.gov |

# Test Order

## *Bordetella pertussis* Serology

## CDC-10166

| | |
|---|---|
| Synonym(s) | IgG against pertussis toxin, Pertussis ELISA, whooping cough |
| **Pre-Approval Needed** | **Pawloski, Lucia, (404) 639-4506, ecz6@cdc.gov**<br>**Tondella, Maria, (404) 639-1239, mlt5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum from patients with two or more weeks of cough, but will accept plasma if serum is unavailable. Centrifuge the tube of blood at 1100-1300 x g for approximately 10 minutes to separate the cells from the serum. |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Serum specimens may be stored refrigerated (2°-8°C) for up to 7 days; If greater than 7 days serum must be kept frozen (-20°C or lower). For long-term storage, the serum should be frozen (-20°C or colder). |
| Transport Medium | Not applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Serum specimens may be shipped refrigerated (2°-8°C) for up to 7 days. For shipments that are in transit for more than 7 days, specimens should be kept frozen (-20°C or lower). Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contact the laboratory by email or phone before shipping. |
| Methodology | Enzyme-linked Immunosorbent Assay (ELISA) |
| Turnaround Time | 5 Days |
| Interferences & Limitations | Serum collected from patients with less than 2 weeks of cough are not appropriate for this test. Samples should not be used if they have incurred more than 5 freeze-thaw cycles. Specimens with unacceptable preservatives such as anti-coagulants would invalidate the results.<br><br>In addition, hemolyzed and lipemic specimens are considered suboptimal serum specimens for this assay. |
| Additional Information | Please include patient age and duration of cough on specimen submission form |
| CDC Points of Contact | Lucia Pawloski<br>(404) 639-4506<br>ecz6@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Bordetella* species ID/Confirmation of Isolates

## CDC-10164

| | |
|---|---|
| Synonym(s) | *B. pertussis*, *B. parapertussis*, *B. holmesii*, *B. bronchiseptica,* whooping cough |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolates on Regan-Lowe, Bordet-Gengou, charcoal agar or blood agar (*B. parapertussis*, *B. holmesii*, or *B. bronchiseptica* only) or cryopreserved isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Isolates can be frozen in cryopreservation medium or refrigerated on Regan-Lowe, Bordet-Gengou, charcoal agar or blood agar (*B. parapertussis*, *B. holmesii*, or *B. bronchiseptica only* |
| Transport Medium | Isolates can be frozen in cryopreservation medium or for best results a fresh subculture on Regan-Lowe, Bordet-Gengou, charcoal agar or blood agar *(B. parapertussis, B. holmesii, or B. bronchiseptica* only) should be sent refrigerated. Calcium alginate and cotton swabs are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Isolates should be shipped refrigerated (2°-8°C) as soon as possible, between 24-48 hours. Frozen isolates should be sent on dry ice. Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Culture, Identification |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prior antibiotic treatment will adversely affect results and patients coughing more than two weeks will likely not be culture positive. |
| Additional Information | None |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Bordetella* species Isolation and ID

## CDC-10163

| | |
|---|---|
| Synonym(s) | *B. pertussis*, *B. parapertussis*, *B. holmesii*, *B. bronchiseptica,* whooping cough |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal (NP) swabs and aspirates; calcium alginate and cotton swabs are not acceptable |
| Minimum Volume Required | 0.5 mL aspirate |
| Storage & Preservation of Specimen Prior to Shipping | Nasopharyngeal (NP) swabs should be collected on Dacron (polyester), rayon or nylon. Specimens should be kept refrigerated. Use plastic/glass screw-cap, leak-proof vials. |
| Transport Medium | Regan-Lowe transport medium is recommended for specimens. Amies Charcoal transports are acceptable, but may decrease the probability of isolation. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Swabs in transport or isolates should be shipped refrigerated (2°-8°C) as soon as possible, between 24-48 hours. Aspirates can be shipped with ice packs or frozen (-20°C or lower). Frozen isolates should be sent on dry ice. Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Culture |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prior antibiotic treatment will adversely affect results. Patients coughing more than two weeks will likely not be culture positive. |
| Additional Information | None |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Bordetella* species Molecular Detection

## CDC-10165

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Cassiday, Pam, (404) 639-1231, pxc1@cdc.gov**<br>**Tondella, Maria, (404) 639-1239, mlt5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Prefer nasopharyngeal aspirate but will also accept nasopharyngeal swab. Calcium alginate and cotton swabs are not acceptable. |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept refrigerated or frozen. Use plastic/glass screw-cap, leak-proof vials |
| Transport Medium | Dry swabs in sterile tubes are preferred; if only one swab is collected for both culture and PCR, the swabs should be sent in Regan-Lowe transport. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol. |
| Shipping Instructions which Include Specimen Handling Requirements | Swabs should be shipped refrigerated (2°-8°C) as soon as possible, between 24-48 hours. Aspirates can be shipped with ice packs or frozen (-20°C or lower). Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Polymerase Chain Reaction (PCR), Real Time Polymerase Chain Reaction (PCR), Multi target Polymerase Chain Reaction (PCR) |
| Turnaround Time | 5 Days |
| Interferences & Limitations | Prior antibiotic treatment will adversely affect results. Specimens collected from patients with more than 4 weeks of cough are not appropriate for this test. Samples should not be used if they have incurred more than 2 freeze-thaw cycles. Clinical specimens collected subsequent to initiation of antimicrobial treatment may not be positive for *Bordetella* spp. Due to reduction of organisms. Whenever possible, specimens collected prior to administration of antimicrobial agents should be used to determine infection with *Bordetella* spp. |
| Additional Information | None |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

*Bordetella* species Study

CDC-10167

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Cassiday, Pam, (404) 639-1231, pxc1@cdc.gov**<br>**Tondella, Maria, (404) 639-1239, mlt5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Bordetella* spp. ID (Not *B. pertussis*/*B. parapertussis*)

## CDC-10143

| | |
|---|---|
| Synonym(s) | *Bordetella* Identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Borrelia burgdorferi* (Lyme Disease) Serology

## CDC-10298

| | |
|---|---|
| Synonym(s) | Lyme Disease, Borreliosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Sera may be stored at 2°-8°C for up to 14 days. If testing is delayed for a longer period, serum samples may be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. Commonly used identifiers are the first and last name and date of birth of the patient. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | IgG/IgM ELISA, IgG Western Blot, IgM Western Blot |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed samples may interfere with test results |
| Additional Information | Two tier testing will be performed. If available, submit any preliminary results. Include the date of onset, antibiotic treatment (type of antibiotics and date administered), date when the sample was collected, signs and symptoms.<br><br>If testing needs to be performed by another laboratory, i.e. arborvirus, please contact laboratory prior to shipping. |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

## *Borrelia* Culture and Identification

## CDC-10299

| | |
|---|---|
| Synonym(s) | Lyme Disease, Borreliosis, Relapsing fever |
| **Pre-Approval Needed** | **Schriefer, Marty, (970) 221-6479, mms7@cdc.gov**<br>**Petersen, Jeannine, (970) 266-3524, nzp0@cdc.gov** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood, skin biopsy (Erythema Migrans Rash) and others upon consultation (i.e. cultures, blood smears for confirmation, spinal fluid, synovial fluid) |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | For a skin biopsy, contact laboratory prior to collection and/or shipment for specific requirements. Blood may be collected in heparin, citrate or EDTA. All specimen should be collected and shipped prior to antibiotic treatment if possible. |
| Transport Medium | Contact laboratory prior to shipping for instructions on skin biopsy's transport medium. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. Commonly used identifiers are the first and last name and date of birth of the patient. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Culture, Microscopy Confirmation |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Antibiotic treatment will minimize growth potential of culture |
| Additional Information | Provide any antibiotic treatment information |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

## *Borrelia hermsii* (Tick-borne Relapsing Fever) Serology

## CDC-10399

| | |
|---|---|
| Synonym(s) | Borreliosis, Recurrent fever, *Borrelia* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. Commonly used identifiers are the first and last name and date of birth of the patient. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | IgM/IgG ELISA |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed specimen can affect the results |
| Additional Information | Two tier testing will be performed. If available, submit any preliminary results. Include the date of onset, antibiotic treatment (type of antibiotics and date administered), date when the sample was collected, signs and symptoms.<br><br>If testing needs to be performed by another laboratory, i.e. arborvirus, please contact laboratory prior to shipping. |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

*Borrelia* Special Study

CDC-10300

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Schriefer, Marty, (970) 221-6479, mms7@cdc.gov**<br>**Petersen, Jeannine, (970) 266-3524, nzp0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

## Botulinum Toxin Producing Clostridia Subtyping

## CDC-10134

| | |
|---|---|
| Synonym(s) | Bot, Botulism |
| **Pre-Approval Needed** | **Luquez (Primary POC), Carolina, (404) 639-0896, fry6@cdc.gov**<br>**Maslanka (Alternate POC), Susan, (404) 639-0895, sht5@cdc.gov** |
| **Supplemental Information Required** | **APHIS/CDC Form 2 Request to Transfer Select Agents and Toxins is required** |
| **Supplemental Form** | http://www.selectagents.gov/forms.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Chopped Meat Glucose Starch (CMGS) or Trypticase Peptone Glucose Yeast extract (TPGY) media. |
| Specimen Labeling | Not Applicable |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Package must have proper labeling for infectious substance: UN 2814 Infectious substance, Category A |
| Methodology | Pulsed field gel electrophoresis (PFGE) |
| Turnaround Time | 12 Weeks |
| Interferences & Limitations | None |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form. APHIS/CDC Form 2 must be approved prior to shipping. Form 2 may be found at: http://www.selectagents.gov/forms.html ; Please send to POC: anticipated arrival date, courier, and tracking number. |
| CDC Points of Contact | Carolina Luquez (Primary POC)<br>(404) 639-0896<br>fry6@cdc.gov<br>Susan Maslanka (Alternate POC)<br>(404) 639-0895<br>sht5@cdc.gov |

# Test Order

## Botulism Laboratory Confirmation

## CDC-10132

| | |
|---|---|
| Synonym(s) | Bot, Botulism |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Foodborne: serum, stool, vomitus, gastric contents, and food<br>Wound: serum, debrided tissue, swab from wounds, and stool<br>Infant: stool, rectal swabs, and potential sources |
| Minimum Volume Required | See Additional Information |
| Storage & Preservation of Specimen Prior to Shipping | Maintain specimen at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Packages may arrive on weekends<br><br>Ship with on cold packs. Package must have proper labeling for biological hazards: UN 3373 biological substance, Category B. |
| Methodology | Mouse Bioassay, ELISA, Mass Spectrometry (MS), Polymerase Chain Reaction (PCR) |
| Turnaround Time | 12 Weeks |
| Interferences & Limitations | None |
| Additional Information | Serum samples must be collected before antitoxin treatment. In addition, for non-infant cases, a serum sample must be collected 24 hours after antitoxin treatment.<br>Adult patients: 5 to 15 ml of serum (without anticoagulant); 10 to 20 g of feces (if an enema is needed, use sterile non-bacteriostatic water). Infant patients: ideally, 10g to 20g of feces should be collected; however, smaller quantities can provide confirmatory test results (if an enema is needed, use sterile non-bacteriostatic water).<br>Foods should be left in their original containers or placed in sterile unbreakable containers. Empty containers with remnants of suspected foods can also be recovered and submitted for testing. |
| CDC Points of Contact | Carolina Luquez (Primary POC)<br>(404) 639-0896<br>fry6@cdc.gov<br>Susan Maslanka (Alternate POC)<br>(404) 639-0895<br>sht5@cdc.gov |

# Test Order

## Botulism Special Study

## CDC-10133

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Luquez (Primary POC), Carolina, (404) 639-0896, fry6@cdc.gov<br>Maslanka (Alternate POC), Susan, (404) 639-0895, sht5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Carolina Luquez (Primary POC)<br>(404) 639-0896<br>fry6@cdc.gov<br>Susan Maslanka (Alternate POC)<br>(404) 639-0895<br>sht5@cdc.gov |

# Test Order

## *Brucella* species Identification, Genotyping, and AST

## CDC-10207

| | |
|---|---|
| Synonym(s) | Brucellosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **http://www.selectagents.gov/forms.html** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Blood/serum, tissue, joint fluid, environmental/nonclinical samples and culture isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Agar slants preferred for shipping isolates |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Select agents that have been identified need form 2 approval prior to shipping. Form 2 may be found at: http://www.selectagents.gov/forms.html<br>Select agents must be shipped Monday through Wednesday to prevent weekend arrivals<br>Agar slants should be shipped at room temperature and specimens at 4°C. |
| Methodology | Polymerase Chain Reaction (PCR), Biochemicals, Phage Suseptability, Broth Micro Dilution, MLVA |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround time will vary depending on if an isolate is sent for identification or a specimen is sent for isolation. Identification of isolates generally is completed within 1 week and susceptibility testing is completed within 2 weeks, while isolation from specimens and subsequent ID may take up to 3 weeks.<br><br>For additional information please refer to the ASM sentinel laboratory guide: http://www.asm.org/images/pdf/Clinical/Protocols/brucella10-15-04.pdf |
| CDC Points of Contact | Rebekah Tiller<br>(404) 639-4507<br>eto3@cdc.gov<br>David Lonsway<br>(404) 639-2825<br>dul7@cdc.gov |

# Test Order

## *Brucella* species Molecular Detection

## CDC-10208

| | |
|---|---|
| Synonym(s) | *Brucella* PCR |
| **Pre-Approval Needed** | None |
| **Supplemental Information Required** | None |
| **Supplemental Form** | http://www.selectagents.gov/forms.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Blood/serum, tissue, joint fluid, environmental/nonclinical samples. Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin). |
| Minimum Volume Required | 250 uL |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Blood specimens should be transported in EDTA or Sodium Citrate tubes at 4°C |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Select agents that have been identified need form 2 approval prior to shipping. Form 2 can be found at: http://www.selectagents.gov/forms.html<br><br>Select agents must be shipped Monday through Wednesday to prevent weekend arrivals. Specimens should be shipped at 4°C. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin) |
| Additional Information | For additional information please refer to the ASM sentinel laboratory guide: http://www.asm.org/images/pdf/Clinical/Protocols/brucella10-15-04.pdf |
| CDC Points of Contact | Rebekah Tiller<br>(404) 639-4507<br>eto3@cdc.gov<br>Alex Hoffmaster<br>(404) 639-0852<br>amh9@cdc.gov |

# Test Order

*Brucella* species Serology

CDC-10197

| | |
|---|---|
| Synonym(s) | BMAT |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum (acute and convalescent preferred) |
| Minimum Volume Required | 100 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum needs to be stored at 4°C |
| Transport Medium | Not applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Ship serum at 4°C |
| Methodology | Brucella microagglutination test (BMAT) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Acute and convalescent sera are preferred<br>No serology available for *B. Canis or RB51*<br>May have poor sensitivity for chronic or complicated brucellosis |
| Additional Information | Acute and convalescent sera are preferred |
| CDC Points of Contact | Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov<br>Renee Galloway<br>(404) 639-5461<br>zul0@cdc.gov |

# Test Order

*Brucella* species Study

CDC-10209

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stodard, Robyn, (404) 639-2053, frd8@cdc.gov**<br>**Tiller, Rebekah, (404) 639-4507, eto3@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov<br>Rebekah Tiller<br>(404) 639-4507<br>eto3@cdc.gov |

# Test Order

## *Burkholderia mallei/pseudomallei* Identification, Genotyping and AST

## CDC-10210

| | |
|---|---|
| Synonym(s) | Glanders, Melioidosis |
| **Pre-Approval Needed** | None |
| **Supplemental Information Required** | None |
| **Supplemental Form** | http://www.selectagents.gov/forms.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates, clinical specimens (blood, bone marrow, sputum or bronchoscopically obtained specimens, abscess material or wound swabs, and urine) |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Agar slants preferred for isolates |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Select agents that have been identified need form 2 approval prior to shipping. Form 2 can be found at http://www.selectagents.gov/forms.html<br>Select agents must be shipped Monday through Wednesday to prevent weekend arrivals. Specimens should be shipped at 4°C. |
| Methodology | Polymerase Chain Reaction (PCR), Biochemicals, Broth Micro Dilution, Multilocus sequence typing (MLST), Multiple-Locus Variable number tandem repeat Analysis (MLVA) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | Turnaround time will vary depending on if an isolate is sent for identification or a specimen is sent for isolation. Identification of isolates generally is completed within 3 days while isolation from specimens and subsequent ID may take up to 10 days.<br>For additional information please refer to the ASM sentinel laboratory guide: http://asm.org/images/pdf/Clinical/Protocols/bpseudomallei2008.pdf |
| CDC Points of Contact | Mindy Elrod<br>(404) 639-4055<br>wzg0@cdc.gov<br>David Lonsway<br>(404) 639-2825<br>dul7@cdc.gov |

# Test Order

## *Burkholderia mallei/pseudomallei* Molecular Detection

## CDC-10211

| | |
|---|---|
| Synonym(s) | Glanders, Melioidosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | http://www.selectagents.gov/forms.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Blood, bone marrow, sputum or bronchoscopically obtained specimens, abscess material or wound swabs, urine, and serum; blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin) |
| Minimum Volume Required | 250 uL |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Dependent on specimen type |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Select agents that have been identified need form 2 approval prior to shipping. Form 2 can be found at http://www.selectagents.gov/forms.html<br>Select agents must be shipped Monday through Wednesday to prevent weekend arrivals. Specimens should be shipped at 4°C. Select agents must be shipped Monday through Wednesday to prevent weekend arrivals. Agar slants should be shipped at room temperature and specimens at 4°C. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Blood specimens should be collected in EDTA or Sodium Citrate tubes (not heparin) |
| Additional Information | For additional information please refer to the ASM sentinel laboratory guide: http://asm.org/images/pdf/Clinical/Protocols/bpseudomallei2008.pdf |
| CDC Points of Contact | Jay Gee<br>(404) 639-4936<br>xzg4@cdc.gov<br>Mindy Elrod<br>(404) 639-4055<br>wzg0@cdc.gov |

# Test Order

*Burkholderia mallei/pseudomallei* Study

CDC-10212

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Elrod, Mindy, (404) 639-4055, wzg0@cdc.gov**<br>**Gee, Jay, (404) 639-4936, xzg4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Mindy Elrod<br>(404) 639-4055<br>wzg0@cdc.gov<br>Jay Gee<br>(404) 639-4936<br>xzg4@cdc.gov |

# Test Order

## *Burkholderia pseudomallei* Serology

## CDC-10198

| | |
|---|---|
| Synonym(s) | Melioidosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum (acute and convalescent required) |
| Minimum Volume Required | 100 uL |
| Storage & Preservation of Specimen Prior to Shipping | Store serum at 4°C before shipping |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Serum should be shipped at 4°C |
| Methodology | IHA-indirect haemagglutantion |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Acute and convalescent are required. |
| Additional Information | Turnaround time may be shorter depending on risk and need |
| CDC Points of Contact | Alex Hoffmaster<br>(404) 639-0852<br>amh9@cdc.gov<br>Mindy Elrod<br>(404) 639-4055<br>wzg0@cdc.gov |

# Test Order

## *Burkholderia* spp. ID (Not *B. mallei*/*B. pseudomallei*)

## CDC-10144

| | |
|---|---|
| Synonym(s) | *Burkholderia* Identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Campylobacter* and *Helicobacter* Study

## CDC-10125

| | | |
|---|---|---|
| Synonym(s) | Campy, *H. pylori* | |
| **Pre-Approval Needed** | **Fitzgerald, Collette, (404) 639-0838, chf3@cdc.gov**<br>**Jones, Patricia, (404) 639-3334, entericbacteria@cdc.gov** | |
| **Supplemental Information Required** | **None** | |
| **Supplemental Form** | **None** | |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics | |
| Acceptable Sample/ Specimen Type for Testing | To be determined | |
| Minimum Volume Required | To be determined | |
| Storage & Preservation of Specimen Prior to Shipping | To be determined | |
| Transport Medium | To be determined | |
| Specimen Labeling | To be determined | |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined | |
| Methodology | | |
| Turnaround Time | | |
| Interferences & Limitations | To be determined | |
| Additional Information | To be determined | |
| CDC Points of Contact | Collette Fitzgerald<br>(404) 639-0838<br>chf3@cdc.gov<br>Patricia Jones<br>(404) 639-3334<br>entericbacteria@cdc.gov | Michael Korth<br>(404) 639-3334<br>mqk8@cdc.gov |

# Test Order

## *Campylobacter* species serology

## CDC-10455

| | |
|---|---|
| Synonym(s) | Enteric Pathogen |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov**<br>**Gomez, Gerry, (404) 639-0537, goe4@cdc.gov** |
| **Supplemental Information Required** | **Date of illness onset, date of serum collection, clinical diagnosis (i.e. Guillain-Barré).** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired serum is preferred. Serum is always preferred but plasma is acceptable. Do not pool specimens. |
| Minimum Volume Required | 100 uL (More Preferred) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain serum at 4°C (preferred); frozen specimens acceptable |
| Transport Medium | Separate serum from the clot and ship in a sterile labeled tube with the top tightly closed |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Gerry Gomez (goe4@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | EIA |
| Turnaround Time | 3 Months |
| Interferences & Limitations | None |
| Additional Information | Paired serum specimens always preferred.<br><br>Please send one tube per specimen submission form. Submit multiple forms if needed. |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Gerry Gomez<br>(404) 639-0537<br>goe4@cdc.gov |

# Test Order

## *Campylobacter*, *Helicobacter*, and Related Organisms Identification

## CDC-10126

| | |
|---|---|
| Synonym(s) | Campy, *H. pylori* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens; Please call for approval prior to sending other specimen types. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship overnight growth on nonselective blood-based slant/stab (preferably not TSA); screw cap tubes preferred |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Phenotypic Identification, Genetic Identification |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Collette Fitzgerald<br>(404) 639-0838<br>chf3@cdc.gov<br>Janet Pruckler<br>(404) 639-4770<br>jmp5@cdc.gov |

# Test Order

## *Campylobacter*, *Helicobacter*, and Related Organisms Identification and Subtyping

## CDC-10127

| | |
|---|---|
| Synonym(s) | Campy, *H. pylori* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens; Please call for approval prior to sending other specimen types. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship overnight growth on nonselective blood-based slant/stab (preferably not TSA); screw cap tubes preferred |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Phenotypic Identification, Genetic Identification, Penner Serotyping, PFGE, AST |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form. Epidemiologic metadata, PulseNet cluster code, and PFGE pattern designation requested if available.<br><br>Turnaround times for routine isolates may be extended during major foodborne outbreak activities due to limited availability of resources. |
| CDC Points of Contact | Collette Fitzgerald<br>(404) 639-0838<br>chf3@cdc.gov<br>Janet Pruckler<br>(404) 639-4770<br>jmp5@cdc.gov |

# Test Order

## Chagas Disease Molecular Detection

## CDC-10475

| | |
|---|---|
| Synonym(s) | *Trypanosoma cruzi*; American trypanosomiasis, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood, Heart Biopsy Tissue, and CSF |
| Minimum Volume Required | 2.2 ml (pediatric 0.2 ml) |
| Storage & Preservation of Specimen Prior to Shipping | Collect about 5 ml blood sample in Vacutainer® EDTA tubes prior to anti-parasitic therapy and store at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen on wet ice (cold pack) as an etiologic agent. |
| Methodology | Real-time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Theresa Benedict<br>(404) 718-4124<br>tgd5@cdc.gov |

# Test Order

## Chagas Disease Serology

## CDC-10458

| | |
|---|---|
| Synonym(s) | *Trypanosoma cruzi*; American trypanosomiasis, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Indirect Fluorescent Antibody Assay, EIA, ELISA, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Hilda Rivera<br>(404) 718-4100<br>igi2@cdc.gov<br>Sue Montgomery<br>(404) 718-4731<br>zqu6@cdc.gov |

# Test Order

## *Chlamydia trachomatis*, Genital – Molecular Detection

## CDC-10192

| | |
|---|---|
| Synonym(s) | *Chlamydia trachomatis* (CT) NAATS, *Chlamydia* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please indicate the product or medium used for storage and/or transport.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Oral pharynx swabs, cervical swabs, vaginal swabs, and rectal swabs collected on any commercially available product, and urine |
| Minimum Volume Required | 5 mL (urine) |
| Storage & Preservation of Specimen Prior to Shipping | Adhere to product insert instructions for swabs |
| Transport Medium | Adhere to product insert instructions for swabs |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Specimen should be shipped on dry ice if previously frozen, as an etiologic agent. |
| Methodology | Nucleic Acid Amplification Tests (NAATS) |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Adhere to product insert instructions for swabs |
| Additional Information | None |
| CDC Points of Contact | John Papp<br>(404) 639-3785<br>jwp6@cdc.gov<br>Carol Farshy<br>(404) 639-2870<br>cef1@cdc.gov |

# Test Order

*Chlamydia trachomatis*, Genital - Study

CDC-10193

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Papp, John, (404) 639-3785, jwp6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | John Papp<br>(404) 639-3785<br>jwp6@cdc.gov<br>Carol Farshy<br>(404) 639-2870<br>cef1@cdc.gov |

# Test Order

## *Chlamydophila pneumoniae* Molecular Detection

## CDC-10152

| | |
|---|---|
| Synonym(s) | *Chlamydia pneumoniae*, Atypical pneumonia, CAP, Chlamydia |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal (NP) and/or Oropharyngeal (OP) swabs, and any lower respiratory tract specimen including bronchoalveolar lavage (BAL) and sputum; tissue, cerebral spinal fluid, isolates and purified nucleic acid; Others upon consultation with laboratory. |
| Minimum Volume Required | Contingent upon specimen type. Please call for consultation |
| Storage & Preservation of Specimen Prior to Shipping | Specimens can be kept refrigerated if shipped in less than 72 hours of collection; otherwise specimen should be kept frozen. Store swabs in universal transport medium. |
| Transport Medium | Universal transport medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be sent on ice packs<br>Frozen specimen should be sent on dry ice |
| Methodology | Real Time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Do not use cotton swabs with wooden shafts. Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | None |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

## *Chlamydophila psittaci* Molecular Detection

## CDC-10153

| | |
|---|---|
| Synonym(s) | Psittacosis, Parrot fever, *Chlamydia psittaci* |
| **Pre-Approval Needed** | **Winchell, Jonas, (404) 639-4921, Jwinchell@cdc.gov**<br>**Diaz, Maureen, (404) 639-4534, mdiaz1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal (NP) and/or Oropharyngeal (OP) swabs, and any lower respiratory tract specimen including bronchoalveolar lavage (BAL) and sputum; tissue, cerebral spinal fluid , isolates and purified nucleic acid; Others upon consultation with laboratory. |
| Minimum Volume Required | Contingent upon specimen type. Please call for consultation |
| Storage & Preservation of Specimen Prior to Shipping | Blood specimen should be collected in EDTA tubes. Tissues should be kept frozen. All other specimens can be kept refrigerated if shipped if less than 72 hours of collection; otherwise specimen should be kept frozen. Store swabs in universal transport medium. |
| Transport Medium | Universal transport medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be sent on ice packs<br>Frozen specimen should be sent on dry ice |
| Methodology | Real Time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Do not send fixed tissues. Do not use cotton swabs with wooden shafts. Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | If specimen is not of human origin please contact Dr. Branson Ritchie at the University of Georgia |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

## *Chlamydophila psittaci* Serology

## CDC-10154

| | |
|---|---|
| Synonym(s) | Psittacosis, Parrot fever, *Chlamydia psittaci* |
| **Pre-Approval Needed** | **Winchell, Jonas, (404) 639-4921, Jwinchell@cdc.gov**<br>**Diaz, Maureen, (404) 639-4534, mdiaz1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired Sera (acute and convalescent) |
| Minimum Volume Required | 2 mL of each serum |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be sent on dry ice |
| Methodology | Micro-immunofluoresence (MIF) |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Improper specimen storage and handling may result in inconclusive or inaccurate results |
| Additional Information | None |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

*Chlamydophila* species Study

CDC-10158

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Winchell, Jonas, (404) 639-4921, Jwinchell@cdc.gov**<br>**Diaz, Maureen, (404) 639-4534, mdiaz1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

## Clinical Microbiology Reference Study

## CDC-10231

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Rasheed, Kamile, (404) 639-3247, JRasheed@cdc.gov**<br>**Limbago, Brandi, (404) 639-2162, Blimbago@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Kamile Rasheed<br>(404) 639-3247<br>JRasheed@cdc.gov<br>Brandi Limbago<br>(404) 639-2162<br>Blimbago@cdc.gov |

# Test Order

## *Clostridium difficile* Identification

## CDC-10228

| | |
|---|---|
| Synonym(s) | *C. Difficile* ID, C. diff |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolates in suitable anaerobic transport medium (e.g., Chopped Meat Glucose Broth) |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store anaerobically |
| Transport Medium | Pure culture isolate in Chopped Meat Glucose Broth, thioglycolate broth or frozen in TSB plus glycerol |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries, as an etiologic agent.<br><br>Frozen specimen should be shipped on dry ice<br>Specimen stored at room temperature should be shipped at room temperature |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | This test does not include strain typing or characterization |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Kamile Rasheed<br>(404) 639-3247<br>jkr1@cdc.gov |

# Test Order

## *Clostridium difficile* Outbreak Strain Typing

## CDC-10229

| | |
|---|---|
| Synonym(s) | *C. Difficile* Toxin, *C. difficile* Characterization |
| **Pre-Approval Needed** | **Rasheed, Kamile, (404) 639-3247, JRasheed@cdc.gov**<br>**Karlsson, Maria, (404) 639-0698, fwt4@cdc.gov** |
| **Supplemental Information Required** | **Prior approval and Epidemiologic consultation required.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate. Additional specimen types accepted upon consultation with laboratory |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store anaerobically |
| Transport Medium | Pure culture isolate in Chopped Meat Glucose Broth, thioglycolate broth or frozen in TSB plus glycerol |
| Specimen Labeling | Include date of isolation and unique specimen identifier |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries, as an etiologic agent.<br><br>Frozen specimen should be shipped on dry ice<br>Specimen stored at room temperature should be shipped at room temperature |
| Methodology | Molecular Strain Typing, Phenotypic Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | Not CLIA compliant testing; for epidemiologic purposes only |
| CDC Points of Contact | Kamile Rasheed<br>(404) 639-3247<br>JRasheed@cdc.gov<br>Maria Karlsson<br>(404) 639-0698<br>fwt4@cdc.gov |

# Test Order

## *Clostridium perfringens* Detection - Foodborne Outbreak

## CDC-10111

| | |
|---|---|
| Synonym(s) | *C. perfringens* |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov**<br>**Gomez, Gerardo, (404) 639-0537, goe4@cdc.gov** |
| **Supplemental Information Required** | **Only specimens from foodborne outbreaks accepted. Consult with EDLB contact before sending specimens. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates, stool and food. Only specimens from foodborne outbreaks accepted. Consult with Dr. Talkington before sending specimens. |
| Minimum Volume Required | 10 g (stool) and 25 g (food) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain stool and food at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Gerardo Gomez (goe4@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Toxin Detection in Stool, Culture, PCR |
| Turnaround Time | 2 Months |
| Interferences & Limitations | None |
| Additional Information | Direct toxin detection requires stool specimens |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Gerardo Gomez<br>(404) 639-0537<br>goe4@cdc.gov |

# Test Order

## Congo-Crimean Hemorrhagic Fever Identification

## CDC-10302

| | |
|---|---|
| Synonym(s) | CCHF |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Congo-Crimean Hemorrhagic Fever Serology

## CDC-10303

| | |
|---|---|
| Synonym(s) | CCHF |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

*Corynebacterium diphtheriae* Study

CDC-10172

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Cassiday, Pam, (404) 639-1231, pxc1@cdc.gov**<br>**Tondella, Maria, (404) 639-1239, mlt5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Corynebacterium diphtheriae* Toxin - Molecular Detection

## CDC-10171

| | |
|---|---|
| Synonym(s) | Diphtheria, Real Time PCR |
| **Pre-Approval Needed** | **Cassiday, Pam, (404) 639-1231, pxc1@cdc.gov**<br>**Tondella, Maria, (404) 639-1239, mlt5@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolates on a suitable agar slant, extracted DNA, or pseudomembrane |
| Minimum Volume Required | 100 uL (DNA) |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept refrigerated or frozen. Use plastic/glass screw-cap, leak-proof vials. Pseudo-membrane should be sent in leak-proof container with saline, not formalin. |
| Transport Medium | Common transport media such as Amies or Stuart may be used for swabs. Isolates should be sent on blood agar slants or TSA. Pseudo-membrane should be sent in leak-proof container with saline not formalin. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Once specimens are collected they should be shipped to the laboratory as soon as possible, between 24-48 hours. Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Real Time Polymerase Chain Reaction (RT-PCR) |
| Turnaround Time | 5 Days |
| Interferences & Limitations | Prior antibiotic treatment will adversely affect results. Suboptimal volumes of specimens may adversely affect the sensitivity of tests performed therefore it is very important to obtain an acceptable volume and a quality specimen. Clinical specimens collected subsequent to initiation of antimicrobial treatment may not be positive for *Corynebacterium* species due to reduction of organisms. Whenever possible, specimens collected prior to administration of antimicrobial agents should be used to determine infection with *Corynebacterium* species. |
| Additional Information | Diphtheria Antitoxin (DAT) testing should be performed on the patient prior to requesting molecular testing from CDC. *Corynebacterium* PCR testing is not currently used for diagnostic purposes for diphtheria and is not considered a confirmatory test. |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Corynebacterium diphtheriae/ulcerans/pseudotuberculosis* ID and Toxigenicity

## CDC-10169

| | |
|---|---|
| Synonym(s) | Diphtheria |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Fresh subculture (24-48 hours old) of a pure culture isolate on a suitable agar slant |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Use plastic/glass screw-cap, leak-proof vials. Isolates can be refrigerated on an agar slant or common culture medium or frozen in TSB with glycerol or other liquid medium. |
| Transport Medium | Common transport medium such as blood agar, TSA, nutrient agar, slants/plates, or frozen |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Once specimens are collected they should be shipped to the laboratory as soon as possible, between 24-48 hours. Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Culture, API Coryne, Elek, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Isolates passed within 24-48 hours are preferred |
| Additional Information | None |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

## *Corynebacterium diphtheriae/ulcerans/pseudotuberculosis*

## Isolation, ID, Toxigenicity

## CDC-10168

| | |
|---|---|
| Synonym(s) | Diphtheria |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Throat, nasal and wound swabs, pseudo-membrane, and sputum |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Use plastic/glass screw-cap, leak-proof vials. Store refrigerated. |
| Transport Medium | Common transport media such as Amies or Stuart may be used for swabs. Pseudo-membrane should be sent in leak-proof container with saline not formalin. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Once specimens are collected they should be shipped to the laboratory as soon as possible, between 24-48 hours. Sender is responsible for shipping charges and when shipping internationally must request CDC's import permit and include this with the Air Waybill. Additionally, the Pertussis/Diphtheria Laboratory requests that the sender contacts the laboratory by email or phone before shipping. |
| Methodology | Culture, Polymerase Chain Reaction (PCR), API Coryne, Elek |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Prior antibiotic treatment will adversely affect results. Suboptimal volumes of specimens may adversely affect the sensitivity of tests performed therefore it is very important to obtain an acceptable volume and a quality specimen. Clinical specimens collected subsequent to initiation of antimicrobial treatment may not be positive for *Corynebacterium* species due to reduction of organisms. Whenever possible, specimens collected prior to administration of antimicrobial agents should be used to determine infection with *Corynebacterium* species. |
| Additional Information | None |
| CDC Points of Contact | Pam Cassiday<br>(404) 639-1231<br>pxc1@cdc.gov<br>Maria Tondella<br>(404) 639-1239<br>mlt5@cdc.gov |

# Test Order

*Corynebacterium* species (Not *C. diphtheriae*) ID

CDC-10136

| | |
|---|---|
| Synonym(s) | Diptheria |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Coxiella burnetii* Molecular Detection

## CDC-10304

| | |
|---|---|
| Synonym(s) | Q fever |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:<br>-Symptom onset date<br>-Sample collection date<br>-Type of infection<br>-Status of illness<br>Recommended:<br>-Travel history<br>-Exposure history<br>-Therapeutic agents<br>-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Acute samples only, anticoagulated whole blood collected in Ethylenediaminetetraacetic acid (EDTA) treated tubes preferred; serum; fresh tissue biopsy |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Ethylenediaminetetraacetic acid (EDTA) blood tubes for blood; tissue in a sample collection tube |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Real Time Polymerase Chain Reaction (PCR), Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Hemolysis in whole blood specimen will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. If a specimen is drawn at convalescence it will reduce the chance of the target organism being present in blood. Avoid collection of blood specimen in heparin tubes. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Coxiella burnetii* Serology

## CDC-10305

| | |
|---|---|
| Synonym(s) | Q fever |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Indirect Fluorescence Assay (IFA) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact laboratory prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

*Coxiella* Special Study

CDC-10306

| | |
|---|---|
| Synonym(s) | Q fever |
| **Pre-Approval Needed** | **Kato, Cecilia, (404) 639-1075, ckato@cdc.gov**<br>**Paddock, Christopher, (404) 639-1309, cdp9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

*Cryptosporidium* Special Study

CDC-10491

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Roellig, Dawn M, (404) 718-4134, iyd4@cdc.gov**<br>**Xiao, Lihua, (404) 718-4161, lax0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Dawn M Roellig<br>(404) 718-4134<br>iyd4@cdc.gov<br>Lihua Xiao<br>(404) 718-4161<br>lax0@cdc.gov |

# Test Order

## *Cyclospora* Molecular Detection

## CDC-10477

| | |
|---|---|
| Synonym(s) | *Cyclospora cayetenensis,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool |
| Minimum Volume Required | 0.5 g or 0.5ml |
| Storage & Preservation of Specimen Prior to Shipping | Stool collected in absence of preservatives must be kept refrigerated (4°C) or frozen. Stool samples in a PCR-compatible fixative, e.g. TotalFix, UniFix, EcoFix and modified PVA (Zn- or Cu-based), can be kept at room temperature. Alternatively stool specimens can also be mixed in potassium dichromate 2.5% (1:1 dilution) or in absolute ethanol (1:1 dilution). |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship fixed/preserved stool at room temperature. Ship unpreserved stool on wet ice (cold pack) if stored refrigerated or ship frozen (on dry ice) if stored frozen. |
| Methodology | Real-Time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Stool specimens fixed in formalin-containing preservatives or LV-PVA are not suitable for molecular studies. |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Theresa Benedict<br>(404) 718-4124<br>tgd5@cdc.gov |

# Test Order

## Cysticercosis Antigen ELISA

## CDC-10490

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **THIS TEST IS NO LONGER PERFORMED AT CDC** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | |
| Minimum Volume Required | |
| Storage & Preservation of Specimen Prior to Shipping | |
| Transport Medium | |
| Specimen Labeling | |
| Shipping Instructions which Include Specimen Handling Requirements | |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | |
| Additional Information | |
| CDC Points of Contact | John Noh<br>(404) 718-4111<br>jxn1@cdc.gov<br>Sukwan Handali<br>(404) 718-4113<br>ahi0@cdc.gov |

# Test Order

## Cysticercosis Immunoblot

## CDC-10459

| | |
|---|---|
| Synonym(s) | Neurocysticercosis, *Taenia solium*, cysitcercus, EITB, LLGP-EITB, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma; Cerebrospinal fluid (CSF) |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Immunoblot, Western Blot, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Cytomegalovirus (CMV) Detection

## CDC-10263

| | |
|---|---|
| Synonym(s) | CMV |
| **Pre-Approval Needed** | **Dollard, Shelia, (404) 639-2178, sgd5@cdc.gov**<br>**Schmid, Scott, (404) 639-0066, dss1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Urine, saliva, and blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a specimen ID. Do not send specimen labeled with patient's name. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Shelia Dollard<br>(404) 639-2178<br>sgd5@cdc.gov<br>Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov |

# Test Order

## Cytomegalovirus (CMV) Serology

## CDC-10264

| | |
|---|---|
| Synonym(s) | CMV |
| **Pre-Approval Needed** | **Dollard, Sheila, (404) 639-2178, sgd5@cdc.gov**<br>**Schmid, Scott, (404) 639-0066, dss1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or plasma |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a specimen ID. Do not send specimen labeled with patient's name. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG antibody detected by EIA, IgM antibody detected by EIA |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Sheila Dollard<br>(404) 639-2178<br>sgd5@cdc.gov<br>Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov |

# Test Order

## Dengue Virus Diagnosis

## CDC-10307

| | |
|---|---|
| Synonym(s) | Dengue fever, Dengue |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Dengue case investigation form must be filled out- See supplemental Form**<br><br>**Additional Information on submitting specimen and the Spanish version of case investigation form are located at:**<br>**http://www.cdc.gov/dengue/clinicalLab/laboratory.html** |
| **Supplemental Form** | **http://www.cdc.gov/dengue/resources/dengueCaseReports/DCIF_English.pdf** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and others upon consultation with laboratory. The blood sample should be taken in a red-top or tiger-top tube. |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | After blood is allowed to clot, separate serum by centrifugation and keep serum refrigerated at 4°C or frozen at -20°C (preferred).<br><br>Citrate (collected in yellow top tubes) and heparin plasma (green top tubes) can be tested by RT-PCR. Violet-top (with EDTA) is not recommended for RT-PCR testing. Violet and or green-top tubes should not be used for serology testing (convalescent sample). Please refer to collection devices manufacturer instructions for more details.<br><br>We recommend freezing the serum immediately after it is separated and to send on dry ice. If dry ice is not available, we recommend that the serum is kept refrigerated and delivered to the CDC Dengue Branch in cold packs. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Include complete name, age, and sex of patient, home address, date of onset of symptoms, date sample was obtained, complete name and mailing address of the physician, laboratory, clinic, or hospital |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs<br><br>Ship To:<br>CDC Dengue Branch and Puerto Rico Department of Health<br>1324 Calle Cañada, San Juan, P. R. 00920-3860 |
| Methodology | IgM by ELISA, NS1 Antigen Test, Polymerase Chain Reaction (PCR), Viral isolation, IgG seroconversion by ELISA |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Serological tests can cross react with other Flavivirus, such as West Nile Virus. Recent vaccinations for Yellow Fever Virus and Japanese Encephalitis Virus, Tick-borne Encephalitis Virus can cause cross reactive test results. Natural infections with St. Louis Encephalitis Virus and West Nile can cause cross reactive results. Hemolyzed or contaminated samples are not acceptable for serology testing. EDTA will affect PCR and serology results and Nitrate tubes will affect IgM results. |
| Additional Information | To diagnose dengue, the laboratory requires a serum sample obtained during |

| | |
|---|---|
| | the acute phase of the infection (DPO=0-5). If this sample is negative, then a second convalescent serum sample (that can be taken from day 6 after the onset of symptoms) is required to confirm the case. The case is confirmed with antibody (IgM or IgG) seroconversion. Informing the patient about the importance of returning for a second sample, and providing an appointment for a specific day and hour, will increase the probability of obtaining the second sample. Samples will be rejected if they are sent without form, form without sample, incomplete or illegible form - especially regarding date of onset of symptoms, date of sample collection and samples received more than a month after onset of illness. |
| CDC Points of Contact | Elizabeth Hunsperger<br>(787) 706-2472<br>enh4@cdc.gov<br>Jorge Munoz<br>(787) 706-2460<br>ckq2@cdc.gov |

# Test Order

## Dengue Virus Special Study

## CDC-10308

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Hunsperger, Elizabeth, (787) 706-2472, enh4@cdc.gov**<br>**Munoz, Jorge, (787) 706-2469, ckq2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Elizabeth Hunsperger<br>(787) 706-2472<br>enh4@cdc.gov<br>Jorge Munoz<br>(787) 706-2469<br>ckq2@cdc.gov |

# Test Order

## Ebola Identification

## CDC-10309

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Ebola Serology

## CDC-10310

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Echinococcosis Immunoblot

## CDC-10460

| | |
|---|---|
| Synonym(s) | Hydatid Disease, *Echinococcus granulosus*, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Immunoblot, Western Blot, Antibody detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## *Ehrlichia* Serology

## CDC-10311

| | |
|---|---|
| Synonym(s) | Human monocytic ehrlichiosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **-Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Indirect Fluorescence Assay (IFA) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact laboratory prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Entamoeba histolytica/dispar* Molecular Detection

## CDC-10478

| | |
|---|---|
| Synonym(s) | Amebiasis, *Entameba histolytica*, *Entameba dispar,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Stool, liver aspirate |
| Minimum Volume Required | 0.5 g or 0.5 ml |
| Storage & Preservation of Specimen Prior to Shipping | Specimens collected in the absence of preservatives must be kept refrigerated (4° C) or frozen. Stool samples in a PCR-compatible fixative, e.g. TotalFix, UniFix, EcoFix and modified PVA (Zn- or Cu-based), can be kept at room temperature. Alternatively stool specimens can also be mixed in potassium dichromate 2.5% (1:1 dilution) or in absolute ethanol (1:1 dilution). |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship fixed/preserved specimens at room temperature. Ship unpreserved specimens on wet ice (cold pack) if stored refrigerated or frozen (on dry ice) if stored frozen. |
| Methodology | Real-Time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Specimens fixed in formalin-containing preservatives or LV-PVA are not suitable for molecular studies. |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Theresa Benedict<br>(404) 718-4124<br>tgd5@cdc.gov |

# Test Order

## Enteric Isolation - Primary Specimen

## CDC-10106

| | |
|---|---|
| Synonym(s) | Enteric Pathogen Culture |
| **Pre-Approval Needed** | **Parsons, Michele, (404) 639-1965, zcp9@cdc.gov**<br>**Talkington, Deborah, (404) 639-3918, dft1@cdc.gov** |
| **Supplemental Information Required** | **Consult with EDLB contact before sending specimens. Targeted organisms include: *Salmonella, Shigella, Campylobacter,* STEC, pathogenic *Enterobacteriaceae, Listeria, Vibrio*, *Cronobacter*, and related foodborne and waterborne pathogens. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Specimens that are acceptable will be determined upon consultation. Targeted organisms include: *Salmonella*, *Shigella*, *Campylobacter*, STEC, pathogenic *Enterobacteriaceae*, *Listeria*, *Vibrio*, *Cronobacter,* and related foodborne and waterborne pathogens. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation are dependent upon consultation |
| Transport Medium | Transport medium is dependent upon consultation |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Specifics of shipping will depend upon consultation |
| Methodology | Enrichment, Isolation, Phenotypic Identification (Serotyping), PCR testing for virulence markers |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Michele Parsons<br>(404) 639-1965<br>zcp9@cdc.gov<br>Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov |

# Test Order

## Enterovirus Detection and Identification

## CDC-10312

| | |
|---|---|
| Synonym(s) | Enterovirus (EV), coxsackieviruses (CVA) (CVB), Echovirus |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Specimens include stool, serum, throat or nasal swab, cerebrospinal fluid (CSF), vesicle fluid or lesion, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs. Fresh or frozen tissues are preferred to Formalin fixed tissues, but will accept both. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Vesicle fluid, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs:<br>Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. Place the swab immediately into a sterile viral containing 2mL of viral transport media without antibiotics, if possible.<br><br>Stool: Collect in a clean, dry, leak-proof container.<br><br>Serum: For each serum specimen, collect whole blood into a serum separator tube (marble or tiger top SST). Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| Transport Medium | Viral transport medium. If you do not have viral transport media, place the swab into a sterile vial without viral transport media. Aseptically, cut or break applicator sticks off near the tip to permit tightening of the cap. For NP/OP swabs, both swabs can be placed in the same vial, if desired. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent.<br><br>Include the full name, title, complete mailing address, email address, telephone, and fax number of the submitter. This will be the person to whom the final report will be mailed to. |
| Methodology | Molecular techniques |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Collecting specimens during the first week of illness is ideal although the virus can be shed in stool for several weeks. A specimen set collected in the second week of illness should include a rectal swab or stool sample. |
| Additional Information | Minimum volume for cell culture is 0.5-1 mL, for CSF is 60 uL, and for fresh frozen tissues is 2 mm^2.<br><br>Stool: Stool may be collected within 14 days of symptom onset. Collect 10-20 g of stool in a clean, dry, leak-proof container. |

| | |
|---|---|
| | Serum: For each serum specimen, collect (adults and children > 6kg: 5 mL, children <6kg: 2 mL) of whole blood into a serum separator tube (marble or tiger top SST). A minimum of 1 mL of whole blood is needed for testing of pediatric patients. Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| CDC Points of Contact | Alan Nix<br>(404) 639-1689<br>wbn0@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Entomology Special Study

## CDC-10494

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Lawrence, Gena, (404) 718-4315, geg7@cdc.gov**<br>**Sutcliffe, Alice, (404) 718-4326, gok0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Animal |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Gena Lawrence<br>(404) 718-4315<br>geg7@cdc.gov<br>Alice Sutcliffe<br>(404) 718-4326<br>gok0@cc.gov |

# Test Order

## Environmental Microbiology Study

## CDC-10232

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Noble-Wang, Judith, (404) 639-2321, cux2@cdc.gov**<br>**O'Connell, Heather, (404) 639-4864, ftw2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Judith Noble-Wang<br>(404) 639-2321<br>cux2@cdc.gov<br>Heather O'Connell<br>(404) 639-4864<br>ftw2@cdc.gov |

# Test Order

## Epstein Barr Virus (EBV) Detection

## CDC-10265

| | |
|---|---|
| Synonym(s) | EBV |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Saliva, cerebrospinal fluid (CSF) or blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a specimen ID. Do not send specimen labeled with patient's name. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## *Escherichia* and *Shigella* Identification, Serotyping, and Virulence Profiling

## CDC-10114

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens; Please call for approval prior to sending other specimen types.**<br><br>**Provide any preliminary results available** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store and ship isolates at ambient temperatures not to exceed 35°C or at 4°C. Isolates held for more than a month should be frozen.<br><br>Ship in compliance with Federal and local guidelines. Shiga toxin-positive bacteria should be shipped as Category A Infectious Substances. |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines. Shiga toxin-positive bacteria should be shipped as Category A Infectious Substances. |
| Methodology | Phenotypic Identification, Genetic Identification, Serotyping and Virulence Profiling, PCR for STEC and other pathotype-specific virulence genes |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Virulence and serotype modification genes encoded by mobile genetic elements (bacteriophages, plasmids and pathogenicity islands) may be spontaneously lost during transit and storage. Conditions that induce a stress response in the bacterium can affect the stability of virulence factors. |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form. Epidemiologic metadata, PulseNet cluster code, and PFGE pattern designation requested if available.<br><br>Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Nancy Strockbine<br>(404) 639-4186<br>nas6@cdc.gov<br>Devon Stripling<br>(404) 639-2251<br>euo4@cdc.gov |

# Test Order

## *Escherichia* and *Shigella* Study

## CDC-10115

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Strockbine, Nancy, (404) 639-4186, nas6@cdc.gov**<br>**Stripling, Devon, (404) 639-2251, euo4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | As directed by study protocol |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Ship as directed by study protocol in compliance with Federal and local guidelines. Shiga toxin-positive bacteria should be shipped as Category A Infectious Substances. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight growth on nonselective slant/stab such as TSA, HIA, etc.; screw cap tubes preferred or as directed by the study protocol. |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | Virulence and serotype modification genes encoded by mobile genetic elements (bacteriophages, plasmids and pathogenicity islands) may be spontaneously lost during transit and storage. Conditions that induce a stress response in the bacterium can affect the stability of virulence factors. |
| Additional Information | None |
| CDC Points of Contact | Nancy Strockbine<br>(404) 639-4186<br>nas6@cdc.gov<br>Devon Stripling<br>(404) 639-2251<br>euo4@cdc.gov |

# Test Order

## *Escherichia coli* (STEC) serology (not serotyping)

## CDC-10452

| | |
|---|---|
| Synonym(s) | Enteric Pathogen |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov**<br>**Pruckler, Jim, (404) 639-3816, jmp3@cdc.gov** |
| **Supplemental Information Required** | **Date of illness onset, date of serum collection, clinical diagnosis. Indicate if patient has HUS and onset date. If patient has undergone plasmaphoresis indicate date on submission form.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired serum is preferred. Serum is always preferred but plasma is acceptable. Do not pool specimens. |
| Minimum Volume Required | 100 uL (More Preferred) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain serum at 4°C (preferred); frozen specimens acceptable. |
| Transport Medium | Separate serum from the clot and ship in a sterile labeled tube with the top tightly closed |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Jim Pruckler (jmp3@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | EIA |
| Turnaround Time | 3 Months |
| Interferences & Limitations | None |
| Additional Information | Paired serum specimens always preferred.<br><br>Please send one tube per specimen submission form. Submit multiple forms if needed. |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Jim Pruckler<br>(404) 639-3816<br>jmp3@cdc.gov |

# Test Order

## *Escherichia coli* and *Shigella* Subtyping

## CDC-10116

| | |
|---|---|
| Synonym(s) | *E. coli* Typing, *Shigella* Typing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Isolates should be identified to the species level by the sender. Provide any preliminary results available. Indicate subtyping method(s) requested on specimen submission form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store isolates at ambient temperatures not to exceed 35°C or at 4°C. Isolates held for more than a month should be frozen |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines. Shiga toxin-positive bacteria should be shipped as Category A Infectious Substances. |
| Methodology | Phenotypic Serotyping, Genetic Serotyping, Virulence Profiling, AST, PFGE, MLVA |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Virulence and serotype modification genes encoded by mobile genetic elements (bacteriophages, plasmids and pathogenicity islands) may be spontaneously lost during transit and storage. Conditions that induce a stress response in the bacterium can affect the stability of virulence factors and may affect the expression of O and H antigens. |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form. Epidemiologic metadata, PulseNet cluster code, and PFGE pattern designation requested if available.<br><br>Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Nancy Strockbine<br>(404) 639-4186<br>nas6@cdc.gov<br>Devon Stripling<br>(404) 639-2251<br>euo4@cdc.gov |

# Test Order

## Filariasis Bm 14 IgG4 ELISA

## CDC-10462

| | |
|---|---|
| Synonym(s) | *Brugia malayi*, *Wuchereria bancrofti*; Bancroftian filariasis, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | EIA, ELISA, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## *Francisella tularensis* Culture and Identification

## CDC-10313

| | |
|---|---|
| Synonym(s) | Tularemia |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Human: lymph node aspirate, sputum, bronchial/tracheal wash, pleural fluid, blood, ulcer swab, biopsy/autopsy specimens (sections of lymph node, lung, liver, spleen); Animal: Necropsy specimen (lymph node, lung, liver or spleen). |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store specimens containing suspected live bacteria at 2°-8°C to maintain viability. If processing is delayed, tissue samples can be directly frozen at -70°C. Store samples for culture of live bacteria without preservatives (formaldehyde, alcohol), at 2°-8°C (not frozen). Anticoagulants such as heparin, citrate and EDTA are acceptable because they do not inhibit the viability of bacteria. |
| Transport Medium | Respiratory specimens, lymph node aspirates, blood, tissue/biopsy/autopsy/necropsy specimens should all be transported at 4°C. Swabs must be in a Cary-Blair or Amies medium, not frozen. If tissue biopsy/autopsy/necropsy transport is delayed, tissue samples can be directly frozen at -70°C. |
| Specimen Labeling | Specimen identifier and patient name |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Culture, Direct Fluorescent Antibody (DFA), Biochemical subtyping |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Samples for testing by culture should be taken prior to antibiotic treatment |
| Additional Information | None |
| CDC Points of Contact | Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov<br>Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov |

# Test Order

## *Francisella tularensis* Serology

## CDC-10314

| | |
|---|---|
| Synonym(s) | Tularemia |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Sera may be stored at 2°-8°C for up to 14 days. If testing is delayed for a longer period, serum samples may be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimen identifier and patient name |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Microagglutination |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed samples interfere with test results |
| Additional Information | None |
| CDC Points of Contact | Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov<br>Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov |

# Test Order

*Francisella tularensis* Special Study

CDC-10315

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Petersen, Jeannine, (970) 266-3524, nzp0@cdc.gov**<br>**Schriefer, Marty, (970) 221-6479, mms7@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov<br>Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov |

# Test Order

## Fungal Identification

## CDC-10179

| | |
|---|---|
| Synonym(s) | Fungal identification, mold identification, yeast identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Isolates can be refrigerated or kept at an ambient temperature |
| Transport Medium | Isolates should be on a suitable agar slant |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Specimen should be shipped at ambient temperature |
| Methodology | Phenotypic Testing, DNA Sequencing |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov<br>Shawn Lockhart<br>(404) 639-2569<br>gyi2@cdc.gov |

# Test Order

## Fungal Serology - *Basidiobolus*

## CDC-10183

| | |
|---|---|
| Synonym(s) | Fungal serology; fungal complement fixation; fungal immunodiffusion |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum; CSF. Plasma is not accepted |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen at 4°C should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice |
| Methodology | Complement Fixation, Immunodiffusion |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolysis and lipidemia may interfere with the test results |
| Additional Information | Serum should be prepared as soon as possible after drawing blood to prevent hemolysis |
| CDC Points of Contact | Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov<br>Mark Lindsley<br>(404) 639-4340<br>mil6@cdc.gov |

# Test Order

## Fungal Serology – *Histoplasma*, *Blastomyces*, *Coccidioides*

## CDC-10180

| | |
|---|---|
| Synonym(s) | Fungal serology, fungal complement fixation, fungal immunodiffusion |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum; CSF. Plasma is not accepted |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen at 4°C should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice |
| Methodology | Complement Fixation, Immunodiffusion |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Hemolysis and lipidemia may interfere with the test results |
| Additional Information | Serum should be prepared as soon as possible after drawing blood to prevent hemolysis |
| CDC Points of Contact | Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov<br>Mark Lindsley<br>(404) 639-4340<br>mil6@cdc.gov<br><br>Shawn Lockhart<br>(404) 639-2569<br>gyi2@cdc.gov |

# Test Order

## Fungal Serology – *Paracoccidioides*

## CDC-10184

| | |
|---|---|
| Synonym(s) | Fungal serology; fungal complement fixation; fungal immunodiffusion |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum; CSF. Plasma is not accepted |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen at 4°C should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice |
| Methodology | Complement Fixation, Immunodiffusion |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Hemolysis and lipidemia may interfere with the test results |
| Additional Information | Serum should be prepared as soon as possible after drawing blood to prevent hemolysis |
| CDC Points of Contact | Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov<br>Mark Lindsley<br>(404) 639-4340<br>mil6@cdc.gov<br><br>Shawn Lockhart<br>(404) 639-2569<br>gyi2@cdc.gov |

# Test Order

## Fungal Serology – *Sporothrix*

## CDC-10182

| | |
|---|---|
| Synonym(s) | Fungal serology, fungal complement fixation, fungal immunodiffusion, latex agglutination for *Sporothrix* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum; CSF. Plasma is not accepted |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be kept either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen at 4°C should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice |
| Methodology | Complement Fixation, Immunodiffusion, Latex Agglutination |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolysis and lipidemia may interfere with the test results |
| Additional Information | Serum should be prepared as soon as possible after drawing blood to prevent hemolysis |
| CDC Points of Contact | Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov<br>Mark Lindsley<br>(404) 639-4340<br>mil6@cdc.gov<br><br>Shawn Lockhart<br>(404) 639-2569<br>gyi2@cdc.gov |

# Test Order

## Fungal Study

## CDC-10181

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Lockhart, Shawn, (404) 639-2569, gyi2@cdc.gov**<br>**Brandt, Mary, (404) 639-0281, mbb4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Not Applicable |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | None |
| CDC Points of Contact | Shawn Lockhart<br>(404) 639-2569<br>gyi2@cdc.gov<br>Mary Brandt<br>(404) 639-0281<br>mbb4@cdc.gov |

# Test Order

## Gastroenteritis Virus Special Study

## CDC-10316

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Vinje, Jan, (404) 639-3721, ahx8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Jan Vinje<br>(404) 639-3721<br>ahx8@cdc.gov<br>Nicole Gregoricus<br>(404) 639-1923<br>frv6@cdc.gov |

# Test Order

## Genital Ulcer Disease (Syphilis, Chancroid, Herpes) Molecular Detection

## CDC-10174

| | |
|---|---|
| Synonym(s) | GUD |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Ulcer swabs, FFPE tissues or frozen tissues, and aspirates from ulcer or buboes |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | FFPE can be kept at room temperature and swabs and other specimens should be kept frozen |
| Transport Medium | Nucleic Acid Amplification Test (NAAT) commercial transport medium, PBS, Saline or TRIS buffer |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship FFPE at room temperature and frozen specimen should be shipped on dry ice, as an etiologic agent. |
| Methodology | PCR |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Cheng Chen<br>(404) 639-3154<br>cyc1@cdc.gov<br>Kai Chi<br>(404) 639-0694<br>krc2@cdc.gov |

# Test Order

## Gram Negative Bacillus (Non-enteric/Nonfermenter) ID

## CDC-10135

| | |
|---|---|
| Synonym(s) | GNR, Gram Negative Rod |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Gram Negative Coccus (Not GC or *meningococcus*) ID

## CDC-10138

| | |
|---|---|
| Synonym(s) | *Neisseria* Identification, GNC |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Gram Positive Bacillus ID

## CDC-10137

| | |
|---|---|
| Synonym(s) | Gram Positive Rod Identification, GPB, GPR |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Haemophilus influenzae* Identification and Serotyping

## CDC-10221

| | |
|---|---|
| Synonym(s) | *H. influenzae* ID and SAST, H. flu |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate, frozen stock, primary specimen such as CSF, whole blood, serum, and other sterile site specimen types upon consultation. |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Store slants at an ambient temperature. Primary specimens or stocks should be kept frozen. |
| Transport Medium | Chocolate agar slants are preferred (plates are not recommended) or frozen stock. |
| Specimen Labeling | Tests subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. Label ABCs/Enhanced Surveillance specimens with the state ID & accession number. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. May ship on Fridays with prior approval only. Frozen specimens should be shipped on dry ice. |
| Methodology | Growth, Morphology, Biochemical Testing, Slide Agglutination Serotyping, Real-time PCR |
| Turnaround Time | 30 Days |
| Interferences & Limitations | Improperly temperature controlled specimens/isolates can give false negative results. |
| Additional Information | None |
| CDC Points of Contact | Brian Harcourt<br>(404) 639-2842<br>beh0@cdc.gov<br>Susanna Schmink<br>(404) 639-5005<br>zma6@cdc.gov<br><br>Meningitis Laboratory<br>(404) 639-1380 |

# Test Order

*Haemophilus influenzae* Study

CDC-10222

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Wang, Xin, (404) 639-5474, gqe8@cdc.gov**<br>**Patel, Manisha, (404) 639-2422, dvn4@cdc.gov** |
| **Supplemental Information Required** | **Brief description of study or surveillance program.**<br><br>**Supplemental Form Required: CDC Meningitis Laboratory: Molecular Typing Request Submission Form (provided upon request by CDC Meningitis Laboratory).** |
| **Supplemental Form** | |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate or frozen stock. |
| Minimum Volume Required | N/A |
| Storage & Preservation of Specimen Prior to Shipping | Store slants at ambient temperature. Stocks should be kept frozen. |
| Transport Medium | Chocolate agar slants or frozen stocks. |
| Specimen Labeling | Tests subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. May ship on Fridays with prior approval only. |
| Methodology | Pulsed Field Gel Electrophoresis (PFGE), Multilocus Sequence Typing (MLST), other testing |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Xin Wang<br>(404) 639-5474<br>gqe8@cdc.gov<br>Melissa Whaley<br>(404) 639-3920<br>dbq3@cdc.gov |

# Test Order

## *Haemophilus* species (Not *H. influenzae*/*H. ducreyi*) ID

## CDC-10141

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Biochemical analysis Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Hantavirus* (No. American) Identification

## CDC-10319

| | |
|---|---|
| Synonym(s) | Hanta, HPS, HFRS |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## *Hantavirus* (So. American) Identification

## CDC-10320

| | |
|---|---|
| Synonym(s) | Hanta, HPS, HFRS |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | See Supplemental Form |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Testing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

*Hantavirus* Serology

CDC-10321

| | |
|---|---|
| Synonym(s) | Hanta, HPS, HFRS, Hantaan |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | See Supplemental Form |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | None |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Healthcare-associated Outbreak Identification and Typing

## CDC-10162

| | |
|---|---|
| Synonym(s) | Healthcare Outbreak or Nosocomial Outbreak |
| **Pre-Approval Needed** | **Noble-Wang, Judith, (404) 639-2321, cux2@cdc.gov**<br>**Moulton-Meissner, Heather, (404) 639-4864, ftw2@cdc.gov** |
| **Supplemental Information Required** | **Supplemental Line List required contact laboratory for more information** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolates and primary environmental specimen (swabs, wipes, water and other fluids, medical devices). In addition, fluids and products used for patient care. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen at a refrigerated temperature until ready for shipping |
| Transport Medium | Use an agar slant not a agar plate for isolates |
| Specimen Labeling | No patient identifiers. Please include specimen identifiers on Line List |
| Shipping Instructions which Include Specimen Handling Requirements | Ship isolates at ambient temperatures and ship environmental specimens on cold-packs. Ship overnight, Monday through Thursday, for delivery within 24 hours of collection. |
| Methodology | IgG Antibody detected by EIA |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Holding environmental samples at room temperature >1 hour after collection may decrease recovery. Neutralization of chlorine residual in potable water is necessary during collection. |
| Additional Information | For most bacteria the turnaround time will be around 3 weeks whereas nontuberculosis mycobacteria will take up to 8 weeks.<br><br>Criteria for submission:<br>-If healthcare facility will be submitting samples directly to CDC then must receive prior approval from State Health Department. Provide State Health Department contact information<br>-State Health Department is investigating a healthcare-associated outbreak<br>-Consultation with CDC/DHQP Prevention and Response Branch on epidemiological investigation. Contact phone number: 404-639-4000<br>-Prior to submitting samples, CDC Consultation regarding epidemiological investigation revealed the potential role of the environment in transmission of infections. |
| CDC Points of Contact | Heather Moulton-Meissner<br>(404) 639-4864<br>ftw2@cdc.gov<br>Judith Noble-Wang<br>(404) 639-2321<br>cux2@cdc.gov |

# Test Order

*Helicobacter pylori* Special Study

CDC-10117

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Rudolph, Karen, (907) 729-3454, kmr2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Karen Rudolph<br>(907) 729-3454<br>kmr2@cdc.gov |

# Test Order

## Hendra Serology

## CDC-10324

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Hepatitis A Serology, NAT and Genotyping

## CDC-10325

| | |
|---|---|
| Synonym(s) | HAV, Hepatitis A virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA plasma, stool |
| Minimum Volume Required | 1.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | Total anti-HAV by Chemiluminescence, IgM anti-HAV by Chemiluminescence, HAV RNA, HAV Genotyping by NAT P2B Sequencing |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Hemolyzed specimen are not accepted |
| Additional Information | NAT based assays and genotyping may take up to 3 weeks for turn around time |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis B Serology, NAT and Genotyping

## CDC-10326

| | |
|---|---|
| Synonym(s) | HBV, Hepatitis B virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA plasma.<br>Note: For Quantitative anti-HBs test - Serum only |
| Minimum Volume Required | 2 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | HBsAg by EIA, IgM anti-HBc by Chemiluminescence, Total anti-HBc by Chemiluminescence, Anti-HBs by Chemiluminescence, HBeAg by Chemiluminescence, Anti-Hbe by EIA, HBV DNA by TaqMan IVD, HBV Genotyping by NAT S Gene Sequencing |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Hemolyzed specimen are not accepted |
| Additional Information | NAT based assays and genotyping may take up to 3 weeks for turn around time |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis B Surface Antigen Confirmatory Test

## CDC-10451

| | |
|---|---|
| Synonym(s) | HBV, Hepatitis B virus |
| **Pre-Approval Needed** | **Drobenuic, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA Plasma |
| Minimum Volume Required | 300uL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen at -20°C |
| Transport Medium | None |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on cold packs |
| Methodology | Neutralization |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Do not send whole blood or hemolyzed serum |
| Additional Information | None |
| CDC Points of Contact | Jan Drobenuic<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis C Serology, NAT and Genotyping

## CDC-10327

| | |
|---|---|
| Synonym(s) | HCV, Hepatitis C virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA Plasma |
| Minimum Volume Required | 2 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | Anti-HCV by Chemiluminescence, HCV RNA by TaqMan IVD, HCV Genotyping by NAT NS5B Gene Sequencing |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Hemolyzed specimen are not accepted |
| Additional Information | NAT based assays and genotyping may take up to 3 weeks for turn around time |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis D Serology, NAT and Genotyping

## CDC-10328

| | |
|---|---|
| Synonym(s) | HDV, Hepatitis D virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA Plasma |
| Minimum Volume Required | 2 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | Total anti-HDV by EIA, HDV RNA by Real Time qRT-PCR, HDV Genotyping by direct sequence analysis |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed specimen are not accepted |
| Additional Information | NAT based assays and genotyping may take up to 3 weeks for turn around time |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis E Serology, NAT and Genotyping

## CDC-10329

| | |
|---|---|
| Synonym(s) | HEV, Hepatitis E virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/hepatitis/HEV/LabTestingRequests.htm |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, EDTA plasma, and stool |
| Minimum Volume Required | 2 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be stored frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | IgM anti-HEV by EIA, IgG anti-HEV by EIA, HEV RNA by Real Time qRT-PCR, HEV Genotyping by direct sequence analysis |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed specimen are not accepted |
| Additional Information | NAT based assays and genotyping may take up to 3 weeks for turn around time |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis Outbreak Investigation

## CDC-10330

| | |
|---|---|
| Synonym(s) | HAV, HBV, HCV, HDV, HEV, Hepatitis A virus, Hepatitis B virus, Hepatitis C virus, Hepatitis D virus, Hepatitis E virus |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Not Applicable |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | None |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Hepatitis Special Study

## CDC-10331

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Drobeniuc, Jan, (404) 639-3790, jqd6@cdc.gov**<br>**Kamili, Saleem, (404) 639-4431, sek6@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | None |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Jan Drobeniuc<br>(404) 639-3790<br>jqd6@cdc.gov<br>Saleem Kamili<br>(404) 639-4431<br>sek6@cdc.gov |

# Test Order

## Herpes Simplex Virus 1 Detection

## CDC-10258

| | |
|---|---|
| Synonym(s) | Oral herpes |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Skin lesion, cerebrospinal fluid (CSF) or saliva |
| Minimum Volume Required | 200 uL (saliva) |
| Storage & Preservation of Specimen Prior to Shipping | Skin lesions should be kept dry and saliva can be kept either refrigerated or frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight on cold packs or dry ice. Skin lesions should be shipped dry. Ship as an etiologic agent.<br>See standard shipping instructions for biologic agent |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Herpes Simplex Virus 1 Serology

## CDC-10259

| | |
|---|---|
| Synonym(s) | Oral herpes |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma, or cerebrospinal fluid (CSF) |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG antibody detected by EIA |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Herpes Simplex Virus 2 Detection

## CDC-10260

| | |
|---|---|
| Synonym(s) | Genital herpes |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | Skin lesion, cerebrospinal fluid (CSF) or saliva |
| Minimum Volume Required | 200 uL (saliva) |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Skin lesions should be kept dry. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight on cold packs or dry ice. Skin lesions should be shipped dry. Ship as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Herpes Simplex Virus 2 Serology

## CDC-10261

| | |
|---|---|
| Synonym(s) | Genital herpes |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma, or cerebrospinal fluid (CSF) |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG antibody detected by EIA |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Herpesvirus Encephalitis Panel

## CDC-10262

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Cerebrospinal fluid (CSF), saliva, whole blood, or skin lesions |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. Skin lesions should be kept dry. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday -Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) for VZV, Polymerase Chain Reaction (PCR) for HSV1, Polymerase Chain Reaction (PCR) for HSV2, Polymerase Chain Reaction (PCR) for EBV, Polymerase Chain Reaction (PCR) for HHV6 |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Herpesvirus Special Study

## CDC-10270

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Schmid, Scott, (404) 639-0066, dss1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov |

# Test Order

## HIV antigen/antibody Combo

## CDC-10485

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or Plasma |
| Minimum Volume Required | 1mL |
| Storage & Preservation of Specimen Prior to Shipping | 2 days at ambient temperature; 7 days at 2-8°C. Specimens should be stored at -20°C for long-term storage and should not have more than 4 freeze/thaw cycles. |
| Transport Medium | |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | For best results, specimens should be shipped frozen on dry ice for overnight delivery to the HIV reference laboratory. |
| Methodology | EIA |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Do not heat inactivate specimens |
| Additional Information | None |
| CDC Points of Contact | Timothy Granade<br>(404) 639-3850<br>txg1@cdc.gov<br>Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov |

# Test Order

## HIV Molecular Surveillance Study (International Only)

## CDC-10332

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Boeras (Primary POC), Debrah, (404) 639-3049, fhz2@cdc.gov**<br>**Yang (Secondary), Chunfu, (404) 639-4975, cxy0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Debrah Boeras (Primary POC)<br>(404) 639-3049<br>fhz2@cdc.gov<br>Chunfu Yang (Secondary)<br>(404) 639-4975<br>cxy0@cdc.gov |

# Test Order

## HIV Serology NHANES

## CDC-10279

| | |
|---|---|
| Synonym(s) | HIV ELISA, HIV antibody |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and/or plasma. The following anticoagulants are acceptable: EDTA, sodium citrate, CPD, CPDA-1, and ACD. SST and PPT are also acceptable. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens may be stored at 2-8°C for 7 days. Long-term storage should be at -20°C or colder and specimens should not have incurred more than 5 freeze-thaw cycles. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Enzyme-linked Immunosorbent Assay (ELISA), Western Blot, Rapid Test |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov<br>Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov |

# Test Order

## HIV Serology Study (International Only)

## CDC-10333

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Parekh, Bharat, (404) 639-3647, bsp1@cdc.gov**<br>**Kalou, Mireille, (404) 639-2794, chn7@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Bharat Parekh<br>(404) 639-3647<br>bsp1@cdc.gov<br>Mireille Kalou<br>(404) 639-2794<br>chn7@cdc.gov |

# Test Order

## HIV Special Study

## CDC-10278

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Owen, Michele, (404) 639-1046, smo2@cdc.gov**<br>**Granade, Tim, (404) 639-3850, txg1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov<br>Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov |

# Test Order

## HIV-1 Drug Resistance Special Study (International Only)

## CDC-10334

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Yang, Chunfu, (404) 639-4975, cxy0@cdc.gov**<br>**Diallo, Karidia, (404) 639-3568, edu9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Chunfu Yang<br>(404) 639-4975<br>cxy0@cdc.gov<br>Karidia Diallo<br>(404) 639-3568<br>edu9@cdc.gov |

# Test Order

## HIV-1 Genotype Drug Resistance (International Only)

## CDC-10335

| | |
|---|---|
| Synonym(s) | HIV DR, HIV, HIV Sequencing, HIV Susceptibility |
| **Pre-Approval Needed** | **Yang, Chunfu, (404) 639-4975, cxy0@cdc.gov**<br>**Diallo, Karidia, (404) 639-3568, edu9@cdc.gov** |
| **Supplemental Information Required** | **Specimens must be accompanied with complete requisition form(s).**<br><br>**Plasma or Serum:**<br>**CDC Form 0.753: Application for Permit to Import or Transport Etiological Agents, Hosts, or Vectors of Human Disease and Requisition Form**<br><br>**Dried Blood Spots:**<br>**Requisition Form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Plasma, serum, and dried blood spots (DBS). Dried blood spots should be least 4 saturated 13mm circles (preferably 5) containing 100 µL of whole blood. |
| Minimum Volume Required | 1 mL (Plasma or Serum) |
| Storage & Preservation of Specimen Prior to Shipping | For plasma or serum keep frozen at -65°C to -80°C for 6 months. Use the appropriate anticoagulant (EDTA).<br><br>Dried blood spots should be kept at an ambient temperature (15°-35°C) for testing performed within 14 days and frozen at -70°C or colder if testing is not performed within 14 days. |
| Transport Medium | Plasma or serum should be transported in a 1.5 - 2.0 mL polypropylene tube with screw cap and O-ring. Transport specimens in frozen conditions using dry ice or liquid nitrogen. Dried blood spots should each be wrapped with a folded sheet of glassine paper. Stack 5-10 glassine paper-wrapped cards into a gas-impermeable, sealable, plastic bag containing 5-10 desiccant packs to remove residual moisture along with one humidity indicator card. Ensure the specimen identification is clearly written on both the DBS card and on the plastic bag. Ensure the humidity indicator can be read without opening the bag. Gently apply pressure to the partially sealed bag to expel the air before sealing it completely. Place 5-10 of the above small bags into a large plastic bag. |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | For shipments that are in transit for up to 14 days, maintain at ambient temperature (20°-30°C) and for greater than 14 days, maintain temperature at -20°C or colder with dry ice. |
| Methodology | Identification of mutations within HIV-1 pol gene region, Sequencing |
| Turnaround Time | 24 Weeks |
| Interferences & Limitations | Do not use heparin as an anticoagulant. Plasma and serum should not be used |

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| | after more than 2 freeze-thaw cycles. Plasma or serum will be rejected if improperly labeled or unlabeled, or with discrepant documentation, insufficient volume, without documentation, unacceptable preservatives, and specimen that have leaked in transit or otherwise shown evidence of contamination.<br><br>Dried blood spots will be rejected if improperly labeled or unlabeled, without documentation or with discrepant documentation, without humidity indicators and desiccants, demonstrating any indication of humidity in the zip lock bags, insufficient volume for testing, improperly collected, containing blood clots or clumps, with a halo around the blood spot indicating contamination, if specimen are congruent or show evidence of commingling and collected onto inappropriate filter paper. |
| Additional Information | The In-house assay may not detect minor viral species that constitute less than 20% of the circulating virus population. Consultation with an expert in HIV drug resistance is encouraged to facilitate interpretation of genotype test results, and to evaluate which mutations and/or combinations of mutations are associated with drug resistance. |
| CDC Points of Contact | Chunfu Yang<br>(404) 639-4975<br>cxy0@cdc.gov<br>Karidia Diallo<br>(404) 639-3568<br>edu9@cdc.gov |

# Test Order

## HIV-1 Nucleic Acid Amplification (Qualitative)

## CDC-10275

| | |
|---|---|
| Synonym(s) | HIV NAAT |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma or whole blood. Specimens may be collected EDTA, ACD sodium citrate, PPT, or serum tubes. Follow sample tube manufacturer's instructions |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen stability is affected by elevated temperature. Whole blood, plasma or serum may be stored for up to 72 hours from time of draw at <= 25°C; temperatures not to exceed 30°C are acceptable for no more than 24 hours. Specimens may be stored an additional five days at 2 to 8°C following centrifugation. Plasma separated from the cells may be stored for longer periods of time at <= 20°C before testing. Do not freeze whole blood. Long-term storage of serum has not been evaluated. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries.<br><br>Keep specimen at room temperature. If frozen, specimen should be shipped on dry ice. |
| Methodology | Nucleic acid amplification |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Collections in heparin coated tubes are unacceptable due to heparin interference with nucleic acid amplification |
| Additional Information | For RNA testing, separate the plasma by centrifugation and freeze (-70°C is optimal, -20°C acceptable) as soon as possible after separation (min volume of 1mL of plasma is required, 5 mLs is optimal). For DNA amplification, (required for HIV-2), freeze the cell pellet after plasma separation (-70°C is optimal, -20°C acceptable). Indicate the original volume of blood used to generate the pellet on the shipping form. If blood separation is not possible, tubes may be shipped overnight at ambient temperature. |
| CDC Points of Contact | Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov<br>Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov |

# Test Order

## HIV-1 Nucleic Acid Amplification (Viral Load)

## CDC-10276

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|---|---|
| Synonym(s) | HIV RNA-PCR, HIV RT-PCR, HIV Roche Viral load, HIV Cobas, HIV Abbot Viral load, HIV NAAT |
| **Pre-Approval Needed** | **Granade, Tim, (404) 639-3850, txg1@cdc.gov**<br>**Owen, Michele, (404) 639-1046, smo2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Plasma collected in ACD or EDTA anticoagulants. Follow manufacturer's instructions for proper collection. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Fresh whole blood may be held at 15-30°C for up to 6 hours or at 2-8°C for up to 24 hours. After centrifugation, plasma may be stored at 15-30°C for up to 24 hours and at 2-8°C for up to 5 days. Plasma may be frozen at -20°C for up to 60 days; longer storage should be at -70°C or colder. Freeze-thaw cycles should be avoided and should not exceed 3 cycles. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries.<br><br>Keep specimen at room temperature. If frozen, specimen should be shipped on dry ice. |
| Methodology | Real time polymerase chain reaction (RT-PCR) |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Collections in heparin coated tubes are unacceptable due to heparin interference with PCR amplification. |
| Additional Information | For RNA testing, separate the plasma by centrifugation and freeze (-70°C is optimal, -20°C acceptable) as soon as possible after separation (min volume of 1mL of plasma is required, 5 mL is optimal). |
| CDC Points of Contact | Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov<br>Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov |

# Test Order

## HIV-1 PCR (International Only) Qualitative

## CDC-10336

| | |
|---|---|
| Synonym(s) | HIV, EID, PMTCT, Early infant diagnostic, DNA |
| **Pre-Approval Needed** | **Boeras(Primary), Debrah, (404) 639-3049, fhz2@cdc.gov**<br>**Yang (Secondary), Chunfu, (404) 639-4975, cxy0@cdc.gov** |
| **Supplemental Information Required** | **Specimens must be accompanied with complete requisition form(s)** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Dried Blood Spots (DBS). At least 4 saturated 13mm circles (preferably 5) containing 50-100 µL of whole blood including capillary blood obtained by finger/toe/heel stick which is dropped directly onto the DBS card. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | The appropriate anticoagulant for DBS whole blood collection is EDTA.<br><br>Dried blood spots should be kept at an ambient temperature (15°-35°C) for testing performed within 14 days and frozen at -70°C if testing is not performed within 14 days. |
| Transport Medium | Transport specimen in a gas impermeable plastic bag with desiccant and humidity indicator card. Each DBS card needs to be packaged separately. |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | For shipments that are in transit for up to 14 days, maintain at ambient temperature (15°-35°C) and shipments that are in transit for greater than 14 days, maintain temperature at -20°C or colder with dry ice. |
| Methodology | Qualitative PCR |
| Turnaround Time | 28 Days |
| Interferences & Limitations | Do not use heparin as an anticoagulant. Specimen will be rejected if improperly labeled or unlabeled, without documentation or with discrepant documentation, without humidity indicators and desiccants, demonstrating any indication of humidity in the zip lock bags, insufficient volume for testing, improperly collected, containing blood clots or clumps, with a halo around the blood spot indicating contamination, if specimen are congruent or show evidence of commingling and collected onto inappropriate filter paper. |
| Additional Information | A test result of "HIV-1 Not Detected" or "Target not detected", does not rule out necessarily HIV-1 DNA for the Amplicor test or HIV-1 RNA and DNA for the COBAS AmpliPrep platform. Either nucleic acid (HIV-1 DNA/RNA) concentrations below the limit of detection of the assays, the presence of PCR inhibitors in the patient specimen or improper specimen handling can lead to false negative results. PCR may not detect infection in the first weeks of infant's life (< 6 weeks) or within 6 weeks of weaning. HIV-1 may not be detected immediately after exposure. The diagnosis of HIV-1 infection is based on clinical presentation and results from additional diagnostic tests such as DNA PCR. Diagnosis should |

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| | not be based solely on a single HIV-1 test. False positive test results may be caused by PCR contamination.<br>NOTE: If a specific testing platform is required, requests must be submitted and reviewed by the team lead. |
| CDC Points of Contact | Debrah Boeras (Primary)<br>(404) 639-3049<br>fhz2@cdc.gov<br>Chunfu Yang (Secondary)<br>(404) 639-4975<br>cxy0@cdc.gov |

# Test Order

## HIV-1 PCR (International Only) Quantitative Viral Load

## CDC-10337

| | |
|---|---|
| Synonym(s) | HIV, VL, RNA |
| **Pre-Approval Needed** | **Boeras (Primary), Debrah, (404) 639-3049, fhz2@cdc.gov**<br>**Yang (Secondary), Chunfu, (404) 639-4975, cxy0@cdc.gov** |
| **Supplemental Information Required** | **Specimens must be accompanied with complete requisition form(s).**<br><br>**CDC Form 0.753: Application for Permit to Import or Transport Etiological Agents, Hosts, or Vectors of Human Disease and Requisition Form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Plasma |
| Minimum Volume Required | 0.2 mL |
| Storage & Preservation of Specimen Prior to Shipping | The appropriate anticoagulant for whole blood collection is EDTA.<br><br>Specimen should be kept at ambient temperature (20°-35°C) within 14 days after collection, but frozen at -70°C if testing is to be performed after 14 days. |
| Transport Medium | Transport specimen in a sterile 1.5-2.0 mL polypropylene tube, screw cap with O-ring |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | For shipments that are in transit for up to 5 days, maintain at (2-8°C) and shipments in transit for greater than 5 days, maintain temperature at -20°C or colder with dry ice. |
| Methodology | Quantitative PCR |
| Turnaround Time | 28 Days |
| Interferences & Limitations | Do not use heparin as an anticoagulant. Do not use specimens after more than 5 freeze-thaw cycles for the Roche assays and 3 freeze-thaw cycles for the Abbott m2000 assay. Specimen will be rejected if improperly labeled or unlabeled, or with discrepant documentation, insufficient volume, without documentation, unacceptable preservatives, and specimen that have leaked in transit or otherwise shown evidence of contamination. |
| Additional Information | An interpretation of "Target Not Detected", "HIV-1 RNA Not Detected ", and "Not Detected" does not rule out the presence of PCR inhibitors or HIV-1 RNA concentrations below the level of detection of the assay. Care should be taken in the interpretation of any single viral load determination. The clinical significance of changes in HIV-1 RNA measurements has not been fully established; however, a change of 0.5 log copies/mL may be significant.<br>The linear range of each assay is as follows:<br>COBAS® AmpliPrep/COBAS® Taqman® v2.0 is 20-10,000,000 copies/mL(1.30log-7.00log) |

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| | Amplicor® HIV-1 Monitor v1.5 is 400-750,000 copies/mL(2.60log-5.88log)<br>Abbott Real Time HIV-1 assay is 40-10,000,000 copies/mL(1.60-7.00log)<br>The COBAS®AmpliPrep/COBAS® Taqman® HIV-1 v2.0 test exhibits a higher level of sensitivity when compared to the Amplicor® HIV-1 Monitor v1.5 test and the Abbott Real Time HIV-1 test for the m2000 system.<br>NOTE: If a specific testing platform is required, requests must be submitted and reviewed by the Team Lead. |
| CDC Points of Contact | Debrah Boeras (Primary)<br>(404) 639-3049<br>fhz2@cdc.gov<br>Chunfu Yang (Secondary)<br>(404) 639-4975<br>cxy0@cdc.gov |

# Test Order

## HIV-1/2 Antibody (International Only) EIA and Western Blot

## CDC-10338

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|---|---|
| Synonym(s) | HIV, EIA, WB, ELISA |
| **Pre-Approval Needed** | **Parekh, Bharat, (404) 639-3647, bsp1@cdc.gov**<br>**Kalou, Mireille, (404) 639-2794, chn7@cdc.gov** |
| **Supplemental Information Required** | **Specimens must be accompanied with complete requisition form(s).**<br><br>**Plasma or serum:**<br>**CDC Form 0.753: Application for Permit to Import or Transport Etiological Agents, Hosts, or Vectors of Human Disease and Requisition Form**<br><br>**Dried Blood Spots:**<br>**Requisition Form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Plasma, serum and dried blood spots. Dried Blood Spots should be at least 4 saturated 13mm filter paper circles (preferably 5) containing 75 µL of whole blood. |
| Minimum Volume Required | 0.5 mL (plasma and serum) |
| Storage & Preservation of Specimen Prior to Shipping | Keep plasma and serum refrigerated at 2°-8°C if testing is performed within 7 days. If testing is performed after 7 days of collection, the specimen should be kept frozen at -20°C or colder.<br><br>Dried blood spots should be stored at an ambient temperature (20°-30°C) if testing is performed within 14 days. Specimen should be frozen at -20°C or colder if testing is not performed within 14 days.<br><br>Plasma: The appropriate anticoagulants for whole blood collection are either EDTA, Sodium heparin or Lithium heparin.<br><br>Dried Blood Spots: For DBS prepared from whole blood collected into tubes, the appropriate anticoagulant for DBS whole blood collection is EDTA. Finger pricks without anti-coagulant dropped directly onto filter paper is also acceptable. |
| Transport Medium | Transport plasma and/or serum in plastic screw-cap vial with O-ring. Dried blood spots should be in gas impermeable plastic bag with desiccant and humidity indicator card and packaged separately. |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | For shipments that are in transit for up to 7 days, maintain temperature at 2-8°C. For shipments that are in transit for greater than 7 days, maintain temperature at -20°C or colder with dry ice.<br><br>For shipments that are in transit for up to 14 days, maintain at ambient temperature (20-30°C). For shipments that are in transit for greater than 14 |

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| | days, maintain temperature at -20°C or colder with dry ice. |
| Methodology | Enzyme Immunoassay, Enzyme-linked Immunosorbent Blot Technique (Western Blot) |
| Turnaround Time | 90 Days |
| Interferences & Limitations | Do not use plasma and serum after more than 5 freeze-thaw cycles. Plasma or serum will be rejected if improperly labeled or unlabeled, without documentation or with discrepant documentation, insufficient volume, unacceptable preservatives, and specimen that have leaked in transit or otherwise shown evidence of contamination.<br><br>Dried blood spots will be rejected if improperly labeled or unlabeled, without documentation or with discrepant documentation, without humidity indicators and desiccants, demonstrating any indication of humidity in the zip lock bags, insufficient volume for testing, improperly collected, containing blood clots or clumps, with a halo around the blood spot indicating contamination, if specimen are congruent or show evidence of commingling and collected onto inappropriate filter paper. |
| Additional Information | Positive results are confirmed by the highly specific method (i.e. Western Blot). Western Blot with an EIA-positivity has combined specificity of greater than 99.9%.<br><br>Testing for EIA and Western Blot is perfumed in batches and the turnaround times are the following:<br><br>Batch with less than 200 specimens - within 50 days<br>Batch with 200-600 - within 70 days<br>Batch with greater than 600 specimens - within 90 days |
| CDC Points of Contact | Bharat Parekh<br>(404) 639-3647<br>bsp1@cdc.gov<br>Mireille Kalou<br>(404) 639-2794<br>chn7@cdc.gov |

# Test Order

## HIV-1/2 Antibody (International Only) Rapid Test

## CDC-10339

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|---|---|
| Synonym(s) | HIV, RT |
| **Pre-Approval Needed** | **Parekh, Bharat, (404) 639-3647, bsp1@cdc.gov**<br>**Kalou, Mireille, (404) 639-2794, chn7@cdc.gov** |
| **Supplemental Information Required** | **Specimens must be accompanied with complete requisition form(s).**<br><br>**CDC Form 0.753: Application for Permit to Import or Transport Etiological Agents, Hosts, or Vectors of Human Disease and Requisition Form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Plasma and serum |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | The appropriate anticoagulants for whole blood collection are EDTA or Sodium heparin. Keep specimen at ambient temperature at 15°-35°C if testing will be performed within 48 hours of collection. If testing is to be performed within 7 days keep specimen refrigerated at 2°-8°C. If testing is to be performed after 7 days, keep specimen frozen at -20°C or colder. |
| Transport Medium | Specimen should be transported in a plastic screw-cap vial |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | For shipments that are in transit for up to 7 days, maintain temperature at 2-8°C and for shipments that are in transit for greater than 7 days, maintain temperature at -20°C or colder with dry ice. |
| Methodology | Immuno-concentration |
| Turnaround Time | 90 Days |
| Interferences & Limitations | Do not use specimens after more than 5 freeze-thaw cycles. Specimen will be rejected if improperly labeled or unlabeled, without documentation or with discrepant documentation, insufficient volume, unacceptable preservatives, and specimen that have leaked in transit or otherwise shown evidence of contamination. |
| Additional Information | Turn around times are dependent on batch specimen:<br><br>Batch with less than 200 specimens - within 50 days<br>Batch with 200-600 - within 70 days<br>Batch with greater than 600 specimens - within 90 days |
| CDC Points of Contact | Bharat Parekh<br>(404) 639-3647<br>bsp1@cdc.gov<br>Mireille Kalou<br>(404) 639-2794 |

# Test Order

HIV-1/2 Antibody (International Only) Rapid Test

CDC-10339

chn7@cdc.gov

# Test Order

## HIV-1/2 Laboratory Algorithm

## CDC-10272

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|---|---|
| Synonym(s) | HIV ELISA, HIV antibody |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and/or plasma. The following anticoagulants are acceptable: EDTA, sodium citrate, CPD, CPDA-1, and ACD. SST and PPT are also acceptable. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens may be stored at 2-8°C for 7 days. Long-term storage should be at -20°C or colder and specimens should not have incurred more than 5 freeze-thaw cycles. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | HIV antigen/antibody combo ELISA or HIV antibody ELISA, HIV-1/2 differentiation assay, Rapid Test, HIV-1 Nucleic acid amplification (qualitative) |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov<br>Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov |

# Test Order

## HIV-2 Nucleic Acid Amplification (Qualitative)

## CDC-10429

| | |
|---|---|
| Synonym(s) | HIV NAAT |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and plasma |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be properly stored in ethylenediaminetetraacetic acid (EDTA) or Acid Citrate Dextrose (ACD) tubes. Serum and plasma can be stored at room temperature. For plasma only collections, Plasma Preparation Tubes (PPT) are suitable. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries.<br><br>Keep specimen at room temperature. If frozen, specimen should be shipped on dry ice. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Collections in heparin coated tubes are unacceptable due to heparin interference with PCR amplification. |
| Additional Information | For RNA testing, separate the plasma by centrifugation and freeze (-70°C is optimal, -20°C acceptable) as soon as possible after separation (min volume of 1mL of plasma is required, 5 mL is optimal). For DNA amplification, (required for HIV-2), freeze the cell pellet after plasma separation (-70°C is optimal, -20°C acceptable). Indicate the original volume of blood used to generate the pellet on the shipping form. If blood separation is not possible, tubes may be shipped overnight at ambient temperature. |
| CDC Points of Contact | Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov<br>Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov |

# Test Order

## HIV-2 Serology

## CDC-10273

| | |
|---|---|
| Synonym(s) | HIV ELISA, HIV antibody |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and/or plasma. The following anticoagulants are acceptable: EDTA, sodium citrate, CPD, CPDA-1, and ACD. SST and PPT are also acceptable. |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Plasma should be properly stored in ethylenediaminetetraacetic acid (EDTA) or Acid Citrate Dextrose (ACD) tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens and accompanying submission forms require 2 unique identifiers. Identifiers that protect the identity of the individual are preferred |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | HIV-1/2 Differentiation Assay, HIV-2 Western Blot |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Tim Granade<br>(404) 639-3850<br>txg1@cdc.gov<br>Michele Owen<br>(404) 639-1046<br>smo2@cdc.gov |

# Test Order

## HPV Special Study

## CDC-10131

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Unger, Elizabeth, (404) 639-3533, eru0@cdc.gov**<br>**Panicker, Gitika, (404) 639-2269, dhv1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | Polymerase Chain Reaction (PCR), Serology |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | |
| CDC Points of Contact | Elizabeth Unger<br>(404) 639-3533<br>eru0@cdc.gov<br>Gitika Panicker<br>(404) 639-2269<br>dhv1@cdc.gov<br><br>Martin Steinau<br>(404) 639-0561<br>azz9@cdc.gov |

# Test Order

## Human Herpes Virus 6 (HHV6) Detection and Subtyping

## CDC-10266

| | |
|---|---|
| Synonym(s) | HHV6 |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Saliva, cerebrospinal fluid (CSF) or blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | None |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Human Herpes Virus 7 (HHV7) Detection

## CDC-10267

| | |
|---|---|
| Synonym(s) | HHV7 |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Saliva, cerebrospinal fluid (CSF) or blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Human Herpes Virus 8 (HHV8) Detection

## CDC-10268

| | |
|---|---|
| Synonym(s) | Kaposi's sarcoma-associated herpesvirus, KSHV, HHV8 |
| **Pre-Approval Needed** | **Dollard, Sheila, (404) 639-2178, sgd5@cdc.gov**<br>**Schmid, Scott, (404) 639-0066, dss1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood or saliva |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a specimen ID. Do not send specimen labeled with patient's name. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Sheila Dollard<br>(404) 639-2178<br>sgd5@cdc.gov<br>Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov |

# Test Order

## Human Herpes Virus 8 (HHV8) Serology

## CDC-10269

| | |
|---|---|
| Synonym(s) | Kaposi's sarcoma-associated herpesvirus, KSHV, HHV8 |
| **Pre-Approval Needed** | **Dollard, Sheila, (404) 639-2178, sgd5@cdc.gov**<br>**Schmid, Scott, (404) 639-0066, dss1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or plasma |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a specimen ID. Do not send specimen labeled with patient's name. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday-Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG antibody detected by IFA |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Sheila Dollard<br>(404) 639-2178<br>sgd5@cdc.gov<br>Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov |

# Test Order

## Influenza Antiviral Resistance Diagnosis

## CDC-10423

| | |
|---|---|
| Synonym(s) | Flu, Influenza Drug resistance, Neuraminidase inhibitor, Influenza Resistance testing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Requires additional WHO submission form that can be obtained with your password** |
| **Supplemental Form** | http://www.nltn.org/Influenza-Speicmen-Submission-Form.xls |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Must type/subtype prior to submission. Virus isolates, RNA, respiratory clinical specimens (nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, lower respiratory tract specimens), and others upon consultation with the laboratory. |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Swab specimens should be collected using only swabs with a synthetic tip, such as nylon or Dacron®, and an aluminum or plastic shaft. Ensure that, when transporting human respiratory specimens, all applicable regulations for the transport of etiologic agents are met. Specimens received cold should be stored refrigerated (2-8°C) for up to 72 hours before processing. Store any residual specimens at ≤ -70°C. Although optimal performance is met when testing fresh specimens within 72 hours of collection, performance has been demonstrated with frozen specimens. If testing of a fresh specimen is not possible within 72 hours storage at 2°-8°C, the specimen may be frozen at ≤ -70°C and tested at a later time. Specimens received frozen should be stored at ≤ -70°C until processing. Store any residual specimens at ≤ -70°C. |
| Transport Medium | Swabs must be in viral transport medium |
| Specimen Labeling | Specimen ID must match the ID on the form |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Prior to shipping, notify CDC Influenza Division that you are sending specimens. Refer to the International Air Transport Association (IATA - www.iata.org) for requirements for shipment of human or potentially infectious biological specimens. Ship extracted RNA and frozen specimen on dry ice. Refrigerated specimens should be shipped on cold packs. |
| Methodology | Pyrosequencing |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Low viral load (Ct values above 29 are not recommended for submission) or genetic variance can affect test results.<br><br>Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended because it can cause a false-negative result. |
| Additional Information | Turn around time may be greater than 3 days during holidays. Testing is not performed on the weekends or on federal holidays. |
| CDC Points of Contact | Larisa Gubareva<br>(404) 639-3204<br>lqg3@cdc.gov<br>Juan De La Cruz<br>(404) 639-0159<br>kjq7@cdc.gov<br><br>David Wentworth<br>(404) 639-3387<br>gll9@cdc.gov |

# Test Order

## Influenza Molecular Diagnosis

## CDC-10421

| | |
|---|---|
| Synonym(s) | Influenza Real Time PCR, Influenza Diagnostics, Flu |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Requires additional WHO submission form that can be obtained with your password** |
| **Supplemental Form** | http://www.nltn.org/Influenza-Speicmen-submission-Form.xls |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Virus isolates, RNA, respiratory clinical specimens (i.e. Nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, lower respiratory tract specimens), and others upon consultation with the laboratory. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Swab specimens should be collected using only swabs with a synthetic tip, such as nylon or Dacron®, and an aluminum or plastic shaft. Ensure that, when transporting human respiratory specimens, all applicable regulations for the transport of etiologic agents are met. Specimens received cold should be stored refrigerated (2°-8°C) for up to 72 hours before processing. Store any residual specimens at ≤ -70°C. Although optimal performance is met when testing fresh specimens within 72 hours of collection, performance has been demonstrated with frozen specimens. If testing of a fresh specimen is not possible within 72 hours storage at 2-8°C, the specimen may be frozen at ≤ -70° C and tested at a later time. Specimens received frozen should be stored at ≤ -70°C until processing. Store any residual specimens at ≤ -70°C. |
| Transport Medium | Swabs must be in viral transport medium |
| Specimen Labeling | Specimen ID must match the ID on the form |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Urgent specimen can be shipped any time with prior approval from the laboratory. Prior to shipping, notify CDC Influenza Division that you are sending specimen. Refer to the International Air Transport Association (IATA - www.iata.org) for requirements for shipment of human or potentially infectious biological specimens.<br><br>Ship extracted RNA and frozen specimen on dry ice.<br>Refrigerated specimen should be shipped on cold packs. |
| Methodology | Real Time PCR, Genetic Sequence Identification |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Low virus numbers or co-infections can affect test results. Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended because it can cause a false-negative result. |
| Additional Information | Specimens requiring additional testing and specimens submitted for surveillance studies will take longer than seven days for results. |
| CDC Points of Contact | Stephen Lindstrom<br>(404) 639-1587<br>sql5@cdc.gov<br>LaShondra Berman<br>(404) 639-1686<br>zhj5@cdc.gov |

# Test Order

## Influenza Serology

## CDC-10424

| | |
|---|---|
| Synonym(s) | Influenza Hemagglutination inhibition assay, Influenza microneutralization assay |
| **Pre-Approval Needed** | **Levine, Min, (404) 639-3504, mwl2@cdc.gov**<br>**Katz, Jackie, (404) 639-4966, jmk9@cdc.gov** |
| **Supplemental Information Required** | **Supplemental form will be supplied upon consultation with laboratory** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired Serum; Acute (less than 7 days post symptoms onset) and convalescent (at least 14 days after acute serum collection) |
| Minimum Volume Required | .5 mL |
| Storage & Preservation of Specimen Prior to Shipping | Should be collected and immediately frozen. Specifics around storage and preservation are supplied on the supplemental form and upon consultation with laboratory. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Please include patient identification number, patients age, date of collection and symptoms onset date. Do not include names. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br>Frozen specimen should be shipped on dry ice<br><br>Obtain approval prior to shipping |
| Methodology | Hemagglutination inhibition assay, Microneutralization assay |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Whole blood cannot be used for testing. Lipemic or hemolyzed sera will affect test results. |
| Additional Information | None |
| CDC Points of Contact | Min Levine<br>(404) 639-3504<br>mwl2@cdc.gov<br>Jackie Katz<br>(404) 639-4966<br>jmk9@cdc.gov<br><br>Heather Tatum<br><br>gpg7@cdc.gov |

# Test Order

## Influenza Special Study

## CDC-10425

| | | |
|---|---|---|
| Synonym(s) | None | |
| **Pre-Approval Needed** | **Wentworth, David, (404) 639-3387, gll9@cdc.gov**<br>**Lindstrom, Stephen, (404) 639-1587, sql5@cdc.gov** | |
| **Supplemental Information Required** | **Requires additional WHO submission form that can be obtained with your password** | |
| **Supplemental Form** | http://www.nltn.org/Influenza-Speicmen-submission-Form.xls | |
| Performed on Specimens From | Human | |
| Acceptable Sample/ Specimen Type for Testing | To be determined | |
| Minimum Volume Required | To be determined | |
| Storage & Preservation of Specimen Prior to Shipping | To be determined | |
| Transport Medium | To be determined | |
| Specimen Labeling | To be determined | |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined | |
| Methodology | | |
| Turnaround Time | | |
| Interferences & Limitations | To be determined | |
| Additional Information | To be determined | |
| CDC Points of Contact | David Wentworth<br>(404) 639-3387<br>gll9@cdc.gov<br>Stephen Lindstrom<br>(404) 639-1587<br>sql5@cdc.gov | Xu Xiyan<br>(404) 639-1657<br>xxx1@cdc.gov<br>Larisa Gubareva<br>(404) 639-3204<br>lqg3@cdc.gov |

# Test Order

## Influenza Surveillance

## CDC-10422

| | |
|---|---|
| Synonym(s) | Flu, Influenza Antigen Characterization |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Requires additional WHO submission form that can be obtained with your password** |
| **Supplemental Form** | http://www.nltn.org/Influenza-Speicmen-submission-Form.xls |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Respiratory specimens (nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, dual nasopharyngeal/throat swabs, bronchoalveolar lavage, sputum, tracheal aspirate, etc.), virus cultures, and others upon consultation with the laboratory. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Swab specimens should be collected using only swabs with a synthetic tip, such as nylon or Dacron®, and an aluminum or plastic shaft. Ensure that, when transporting human respiratory specimens, all applicable regulations for the transport of etiologic agents are met. Specimens received cold should be stored refrigerated (2-8°C) for up to 72 hours before processing. Store any residual specimens at ≤ -70°C. Although optimal performance is met when testing fresh specimens within 72 hours of collection, performance has been demonstrated with frozen specimens. If testing of a fresh specimen is not possible within 72 hours storage at 2°-8°C, the specimen may be frozen at ≤ -70°C and tested at a later time. Specimens received frozen should be stored at ≤ -70°C until processing. Store any residual specimens at ≤ -70°C. |
| Transport Medium | Swabs must be in viral transport medium |
| Specimen Labeling | Specimen ID must match the ID on the form |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Urgent specimen can be shipped at any time with prior approval from the laboratory. Refer to the International Air Transport Association (IATA - www.iata.org) for requirements for shipment of human or potentially infectious biological specimens.<br><br>Ship extracted RNA and frozen specimen on dry ice.<br>Refrigerated specimen should be shipped on cold packs. |
| Methodology | Hemagglutination Inhibition (HI) test, Virus Culture |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Low virus numbers or co-infections can affect test results. Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended because it can cause a false-negative result. |
| Additional Information | Turn around time may take up to a month if the virus needs to be cultured. Turn around time for isolates may be less than 1 month. |
| CDC Points of Contact | Xiyan Xu<br>(404) 639-1657<br>xxx1@cdc.gov<br>Wendy Sessions<br>(404) 639-3211<br>gra6@cdc.gov |

# Test Order

## Junin Serology

## CDC-10340

| | |
|---|---|
| Synonym(s) | Argentine Hemorrhagic Fever, AHF, *arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Kyasanur Forest Disease Serology

## CDC-10341

| | |
|---|---|
| Synonym(s) | KFD |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Laguna Negra Serology

## CDC-10342

| | |
|---|---|
| Synonym(s) | HPS, hanta |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Lassa Fever Identification

## CDC-10343

| | |
|---|---|
| Synonym(s) | *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Lassa Fever Serology

## CDC-10344

| | |
|---|---|
| Synonym(s) | *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## *Legionella* species Identification and Typing

## CDC-10159

| | |
|---|---|
| Synonym(s) | Legionnaires' disease or LD, Legionellosis, Pontiac fever |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates or culture. For Human origin the acceptable specimen are sputum, bronchoalveolar lavage (BAL), lung tissue, and endotracheal tube (ETT). For specimen of environmental origin only isolates are accepted. |
| Minimum Volume Required | Contingent upon specimen type. Please call for consultation |
| Storage & Preservation of Specimen Prior to Shipping | Clinical specimen should be frozen immediately. Isolates should be on appropriate slants (Buffered Charcoal Yeast Extract (BCYE)). |
| Transport Medium | BCYE or equivalent slants for isolates |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be sent on dry ice |
| Methodology | Culture, Serogrouping, Sequencing, Real Time PCR |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | If only PCR is needed then turn around time will be shorter than 4 weeks |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Natalia Kozak<br>(404) 639-2305<br>htv2@cdc.gov |

# Test Order

## *Legionella* species Molecular Detection

## CDC-10160

| | |
|---|---|
| Synonym(s) | Legionnaires' disease or LD, Legionellosis, Pontiac fever, Atypical pneumonia |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Any lower respiratory tract specimen including bronchoalveolar lavage (BAL), endotracheal tube (ETT), lung biopsy or tissue, and sputum; isolates and purified nucleic acid. |
| Minimum Volume Required | Contingent upon specimen type. Please call for consultation |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be sent on dry ice |
| Methodology | Real Time PCR, Sequencing |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | None |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Natalia Kozak<br>(404) 639-2305<br>htv2@cdc.gov |

# Test Order

*Legionella* species Study

CDC-10161

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Winchell, Jonas, (404) 639-4921, Jwinchell@cdc.gov**<br>**Kozak, Natalia, (404) 639-2305, htv2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Natalia Kozak<br>(404) 639-2305<br>htv2@cdc.gov |

# Test Order

*Leishmania* species Identification

CDC-10238

| | |
|---|---|
| Synonym(s) | Parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Must contact CDC prior to sample collection at bnz0@cdc.gov, and CDC will provide the culture medium (typically Novy-MacNeal-Nicolle (NNN) medium).** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Tissue, blood, bone marrow |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Culture medium (typically Novy-MacNeal-Nicolle (NNN) medium). Keep media refrigerated until it is used (stable for 2-4 weeks) and bring it to room temperature right before inoculation. Once inoculated, keep the culture at room temperature and send to CDC as soon as possible by overnight mail. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Culture should be kept at room temperature and mailed as soon as possible, as an etiologic agent. Blood and bone marrow should be shipped on wet ice (cold pack). |
| Methodology | PCR and DNA sequencing, Culture |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Formalin fixed specimens are not suitable for culture |
| Additional Information | None |
| CDC Points of Contact | Marcos de Almeida<br>(404) 718-4175<br>bnz0@cdc.gov<br>Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov |

# Test Order

## Leishmaniasis Serology

## CDC-10463

| | |
|---|---|
| Synonym(s) | Leishmaniasis Serology, Visceral leishmaniasis, Kala azar; *Leishmania donovoni*, *Leishmania major*, *Leishmania*, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Antibody detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Marcos de Almeida<br>(404) 718-4175<br>bnz0@cdc.gov<br>Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov |

# Test Order

## *Leptospira* species Identification and Genotyping

## CDC-10199

| | |
|---|---|
| Synonym(s) | Leptospirosis |
| **Pre-Approval Needed** | **Galloway, Renee, (404) 639-5461, zul0@cdc.gov**<br>**Stoddard, Robyn, (40) 463-9205, frd8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Isolate and media inoculated with clinical specimens (blood, tissue and urine) |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Cultures should be stored at room temperature |
| Transport Medium | Isolates need to be shipped on Ellinghausen-McCullough-Johnson-Harris (EMJH) semisolid media |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Isolates should be shipped at room temperature. All other specimens shipped at 4°C. |
| Methodology | Multilocus sequence typing (MLST), Pulsed field gel electrophoresis (PFGE), Microscopy, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround time will vary depending on if an isolate is sent for identification or a specimen is sent for isolation. Primary isolation from clinical specimens takes up to 6 months. |
| CDC Points of Contact | Renee Galloway<br>(404) 639-5461<br>zul0@cdc.gov<br>Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov |

# Test Order

## *Leptospira* species Molecular Detection

## CDC-10200

| | |
|---|---|
| Synonym(s) | Leptospirosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Clinical specimens (blood and urine). Blood specimens should be collected in EDTA or Sodium Citrate tubes |
| Minimum Volume Required | 250 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep frozen at -20ºC |
| Transport Medium | Blood specimens transported in EDTA or Sodium Citrate tubes |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Specimens should be shipped frozen at -20ºC |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Blood specimens collected in heparin are not acceptable |
| Additional Information | None |
| CDC Points of Contact | Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov<br>Renee Galloway<br>(404) 639-5461<br>zul0@cdc.gov |

# Test Order

*Leptospira* species Serology

CDC-10201

| | |
|---|---|
| Synonym(s) | Leptospirosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum for MAT (acute and convalescent preferred for MAT). Serum or whole blood for ImmunoDOT (human only) |
| Minimum Volume Required | 100 uL |
| Storage & Preservation of Specimen Prior to Shipping | Store serum at 4°C before shipping |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Serum should be shipped at 4°C |
| Methodology | MAT-micro agglutination, ImmunoDOT |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Acute and convalescent preferred for MAT<br>MAT can be performed on human or animal sera but ImmunoDOT is for human sera only |
| Additional Information | ImmunoDOT (IgM detection) can be reported within 1 week while MAT takes up to 2 weeks for confirmation |
| CDC Points of Contact | Renee Galloway<br>(404) 639-5461<br>zul0@cdc.gov<br>Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov |

# Test Order

*Leptospira* species Study

CDC-10202

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Galloway, Renee, (404) 639-5461, zul0@cdc.gov**<br>**Stoddard, Robyn, (404) 639-2053, frd8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Renee Galloway<br>(404) 639-5461<br>zul0@cdc.gov<br>Robyn Stoddard<br>(404) 639-2053<br>frd8@cdc.gov |

# Test Order

## *Listeria* Identification

## CDC-10128

| | |
|---|---|
| Synonym(s) | *Listeria* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens but is required for all other specimen types.**<br><br>**Provide any preliminary results that are available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship growth on nonselective slant/stab such as TSA, HIA, etc.; screw cap tubes preferred. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Phenotypic Idenification, Genetic Identification |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Zuzana Kucerova<br>(404) 718-4143<br>zik0@cdc.gov |

# Test Order

## *Listeria monocytogenes* Identification and Subtyping

## CDC-10129

| | |
|---|---|
| Synonym(s) | *Listeria* Typing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens, but is required for all other specimen types.**<br><br>**Provide any preliminary results available. Indicate subtyping method(s) requested on specimen submission form.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship growth on nonselective slant/stab such as TSA, HIA, etc.; screw cap tubes preferred. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Phenotypic Identification, Genetic Identification, PFGE, MLVA |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities due to limited availability of resources. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Zuzana Kucerova<br>(404) 718-4143<br>zik0@cdc.gov |

# Test Order

*Listeria* Study

CDC-10130

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Tarr, Cheryl, (404) 639-2011, crt6@cdc.gov**<br>**Kucerova, Zuzana, (404) 718-4143, zik0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Zuzana Kucerova<br>(404) 718-4143<br>zik0@cdc.gov |

# Test Order

## LRN Biothreat Multi-Agent Screening - Environmental

## CDC-10430

| | |
|---|---|
| Synonym(s) | Screening for *Bacillus anthracis*, *Brucella spp.*, *Burkholderia mallei*, *Burkholderia pseudomallei*, *Francisella tularensis*, *Yersinia pestis*, Orthopoxvirus, and ricin toxin. |
| **Pre-Approval Needed** | **Bowzard, Brad, (404) 639-3626, jbowzard@cdc.gov**<br>**Sue, David, (404) 639-4027, dsue@cdc.gov** |
| **Supplemental Information Required** | **Please contact Dr. Brad Bowzard at 404 639-3626 or jbowzard@cdc.gov, for the required supplemental form and packaging and shipping requirements.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Bulk sampling of visible materials (e.g., powders, liquids, etc.) and/or sampling from contaminated surfaces (e.g., with polyester swabs). |
| Minimum Volume Required | Dependent on Specimen Type |
| Storage & Preservation of Specimen Prior to Shipping | Dry swabs or powders can be stored and shipped at room temperature. Liquid samples should be held and shipped at 4°C. |
| Transport Medium | None |
| Specimen Labeling | No special requirements |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries, if possible. If weekend delivery is necessary, please contact laboratory upon shipment. |
| Methodology | Real Time PCR, Culture Isolation, Time-Resolved Fluorescence |
| Turnaround Time | |
| Interferences & Limitations | Dependent on sample time |
| Additional Information | Turnaround time is dependent on test and sample type. |
| CDC Points of Contact | Brad Bowzard<br>(404) 639-3626<br>jbowzard@cdc.gov<br>David Sue<br>(404) 639-4027<br>dsue@cdc.gov |

# Test Order

## LRN Biothreat Multi-Agent Surface Samples - Environmental

## CDC-10495

| | |
|---|---|
| Synonym(s) | *Bacillus anthracis* spore environmental swab and wipe processing procedures; 3M™ Sponge Stick®, macrofoam swabs, surface samples |
| **Pre-Approval Needed** | **Bowzard, Brad, (404) 639-3626, jbowzard@cdc.gov**<br>**Sue, David, (404) 639-4027, dsue@cdc.gov** |
| **Supplemental Information Required** | **Please contact Dr. Brad Bowzard at 404 639-3626 or jbowzard@cdc.gov for the required supplemental form and packaging and shipping requirements.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Sampling from surfaces with no visible contamination using Macrofoam swab or M™ Sponge Stick®; currently only applies for *B. anthracis*. |
| Minimum Volume Required | For appropriate interpretation of results, defined sampling areas for each device must be followed Macrofoam swab = 26cm2 , 3M™ Sponge Stick® = 645 cm2. |
| Storage & Preservation of Specimen Prior to Shipping | Devices should be held at 4 degrees and shipped on ice within 24 hours of collection. |
| Transport Medium | None |
| Specimen Labeling | No special requirements |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries, if possible. If weekend delivery is necessary, please contact laboratory upon shipment. |
| Methodology | Culture with RT-PCR confirmation of colonies |
| Turnaround Time | 4 Days |
| Interferences & Limitations | Large quantities of dust and/or other organisms may reduce limits of detection. |
| Additional Information | Testing should be initiated within 24 hours of receipt. Turn around time ranges from 1-4 days. |
| CDC Points of Contact | Brad Bowzard<br>(404) 639-3626<br>jbowzard@cdc.gov<br>David Sue<br>(404) 639-4027<br>dsue@cdc.gov |

# Test Order

## Lymphocytic Choriomeningitis (LCM) Identification

## CDC-10345

| | |
|---|---|
| Synonym(s) | LCM, *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood, serum, and CSF |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Lymphocytic Choriomeningitis (LCM) Serology

## CDC-10346

| | |
|---|---|
| Synonym(s) | LCM, *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | CSF, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Machupo Identification

## CDC-10347

| | |
|---|---|
| Synonym(s) | Bolivian Hemorrhagic Fever, BHF, *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Machupo Serology

## CDC-10348

| | |
|---|---|
| Synonym(s) | Bolivian Hemorrhagic Fever, BHF, *Arenavirus* |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Malaria Indirect Fluorescent Antibody Test

## CDC-10464

| | |
|---|---|
| Synonym(s) | *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Travel history REQUIRED, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Indirect Fluorescent Antibody Assay, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Malaria Molecular Identification

## CDC-10480

| | |
|---|---|
| Synonym(s) | *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae*, *Plasmodium ovale,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include the blood smear slides in the shipment** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood; Please include the blood smear slides in the shipment |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Collect a 1-5 ml blood sample in Vacutainer® EDTA tubes prior to anti-parasitic therapy and store at 4°C. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen on wet ice (cold pack) as an etiologic agent. |
| Methodology | Conventional PCR, Real-Time PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Maniphet Xayavong<br>(404) 718-4125<br>max1@cdc.gov |

# Test Order

## Malaria Surveillance

## CDC-10235

| | |
|---|---|
| Synonym(s) | Malaria Drug Resistance typing, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Supplemental form not needed** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Blood collected in EDTA tubes |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Blood should be collected in EDTA tubes |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Do not ship specimen frozen. |
| Methodology | Polymerase Chain Reaction (PCR), DNA Sequencing, In-vitro culture |
| Turnaround Time | |
| Interferences & Limitations | None |
| Additional Information | Turnaround time is determined by the surveillance project, no individual patient reports are issued<br><br>Please provide information on travel history and history of anti-malarial usage |
| CDC Points of Contact | John Barnwell<br>(404) 718-4420<br>wzb3@cdc.gov<br>Lucianna Flannery<br>(404) 718-4404<br>vva3@cdc.gov |

# Test Order

## Marburg Identification

## CDC-10349

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Marburg Serology

## CDC-10350

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Measles and Rubella Detection and Genotyping

## CDC-10243

| | |
|---|---|
| Synonym(s) | Measles, Rubeola, Rubella, German measles; three day measles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Throat swab in viral medium, Nasopharyngeal aspirate or swab, urine, cataracts, lens aspirate, oral fluid, cerebrospinal fluid (CSF), dry blood spots, and tissue samples |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Measles: http://www.cdc.gov/measles/lab-tools/<br>Rubella: http://www.cdc.gov/rubella/lab/index.html<br><br>Also see: http://www.cdc.gov/vaccines/pubs/surv-manual/index.html<br>http://www.cdc.gov/measles/lab-tools/index.html |
| Transport Medium | Viral transport medium for swabs and appropriate culture medium. Make sure tubes are all in leak proof containers. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | The laboratory requests that the sender contacts the laboratory by email or phone before shipping.<br><br>For shipping address see: http://www.cdc.gov/measles/lab-tools/<br><br>Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real time RT-PCR, Genotyping by nucleic acid sequencing, Template production by RT-PCR, Viral culture |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Measles: http://www.cdc.gov/measles/lab-tools/<br>Rubella: http://www.cdc.gov/rubella/lab/index.html<br><br>Also see, http://www.cdc.gov/vaccines/pubs/surv-manual/index.html<br>http://www.cdc.gov/measles/lab-tools/index.html |
| Additional Information | Please include vaccination history, age, date of symptom onset and sample collection |
| CDC Points of Contact | Paul Rota<br>(404) 639-4181<br>par1@cdc.gov<br>Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov |

# Test Order

## Measles and Rubella Serology

## CDC-10247

| | |
|---|---|
| Synonym(s) | Measles, Rubeola, Rubella, German measles, three day measles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and others upon consultation with laboratory |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries.<br><br>Refrigerated or frozen specimen should be shipped on cold packs.<br>laboratory will instruct on how to ship for other specimen types. |
| Methodology | Commercial capture IgM, Commercial indirect IgG |
| Turnaround Time | 7 Days |
| Interferences & Limitations | IgM positive may not occur until 5 days post-rash onset |
| Additional Information | IgM and IgG assays are qualitative assays.<br>For outbreaks or immuno-compromised patients please contact laboratory prior to shipment. |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov |

# Test Order

## Measles Avidity

## CDC-10248

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Bellini, Bill, (404) 639-4183, wjb2@cdc.gov**<br>**Mercader, Sara, (404) 639-4568, sjm7@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 300 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated, not frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a unique identifier on the specimen container and the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Measles avidity |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | http://www.cdc.gov/vaccines/pubs/surv-manual/index.html |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Sara Mercader<br>(404) 639-4568<br>sjm7@cdc.gov |

# Test Order

## Measles Detection and Genotyping

## CDC-10240

| | |
|---|---|
| Synonym(s) | Rubeola |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Throat swab in viral transport medium, nasopharyngeal aspirate or swab, urine, oral fluid, cerebrospinal fluid (CSF), dry blood spots, and tissue samples |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | See: http://www.cdc.gov/measles/lab-tools/rt-pcr.html for detailed information on storage and preservation of specimen |
| Transport Medium | Viral transport medium for swabs. Make sure tubes are all leak proof containers. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | The laboratory requests that the sender contacts the laboratory by email or phone before shipping<br><br>See instructions and shipping address: http://www.cdc.gov/measles/lab-tools/<br><br>Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Viral culture, Genotyping by Nucleic acid sequencing, Real time RT-PCR, Template production by RT-PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | See: http://www.cdc.gov/measles/lab-tools/ for information on the interferences and limitations of this test |
| Additional Information | Please include vaccination history, age, date of rash onset and date of sample collection<br><br>For additional information, please see measles surveillance manual:<br>http://www.cdc.gov/vaccines/pubs/surv-manual/chpt07-measles.html |
| CDC Points of Contact | Paul Rota<br>(404) 639-4181<br>par1@cdc.gov<br>Rebecca McNall<br>(404) 639-4541<br>dqo2@cdc.gov |

# Test Order

## Measles Neutralization Antibody (Not for Immune Status)

## CDC-10250

| | |
|---|---|
| Synonym(s) | PRN test, Plaque-reduction neutralization |
| **Pre-Approval Needed** | **Bellini, Bill, (404) 639-4183, wjb2@cdc.gov**<br>**Sowers, Sun, (404) 639-1360, sib9@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/vaccines/pubs/surv-manual/index.html |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 300 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated, not frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a unique identifier on the specimen container and the test requisition |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Neutralization assay - quantitative serological assay |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Sun Sowers<br>(404) 639-1360<br>sib9@cdc.gov |

# Test Order

## Measles Serology

## CDC-10244

| | |
|---|---|
| Synonym(s) | Rubeola |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and others upon consultation |
| Minimum Volume Required | 300 uL (50 uL) |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated, not frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs<br>Laboratory will instruct on how to ship for other specimen types |
| Methodology | CDC capture IgM, Commercial indirect IgG |
| Turnaround Time | 7 Days |
| Interferences & Limitations | IgM positive may not occur until 4 days post-rash onset |
| Additional Information | IgM and IgG assays are qualitative assays<br><br>For outbreaks or immuno-compromised patients please contact laboratory prior to shipment<br><br>Please include vaccination history, age, date of onset and sample collection |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Nobia Williams<br>(404) 639-1049<br>new8@cdc.gov |

# Test Order

## Measles Special Study

## CDC-10251

| | |
|---|---|
| Synonym(s) | Rubeola |
| **Pre-Approval Needed** | **Bellini, Bill, (404) 639-4183, wjb2@cdc.gov**<br>**Rota, Paul, (404) 639-4181, par1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Paul Rota<br>(404) 639-4181<br>par1@cdc.gov |

# Test Order

## MERS-CoV PCR

## CDC-10488

| | |
|---|---|
| Synonym(s) | MERS-CoV PCR, Middle East Respiratory Syndrome Coronavirus PCR |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/coronavirus/mers/downloads/MERS-investigation-short-form.pdf** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal wash/aspirates, nasopharyngeal swabs, oropharyngeal swabs, broncheoalveolar lavage, tracheal aspirate, pleural fluid tap, sputum, stool, serum, EDTA blood (plasma), and post-mortem tissue. For more information go to: http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html; http://www.cdc.gov/coronavirus/mers/guidelines-lab-biosafety.html |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate or freeze tubes after specimens are placed in them. If specimens will be examined within 48 hours after collection, they can be refrigerated. If specimens must be held longer than 48 hours, freeze them as soon as possible after collection. Although storage in an ultra-low freezer (-70°C) is preferable, storage in a home-type freezer (if properly set at -20°C) is acceptable for short periods.<br><br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html<br>http://www.cdc.gov/coronavirus/mers/guidelines-lab-biosafety.html |
| Transport Medium | Swabs may be shipped in commercial viral transport media |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Contact Dean Erdman (dde1@cdc.gov, 404-639-3727) for shipping address.<br><br>See the following link for additional shipping information:<br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 2 Days |
| Interferences & Limitations | **Virus isolation in cell culture and initial characterization of viral agents recovered in cultures of MERS-CoV specimens are NOT recommended at this time. However, if done, these activities must be performed in a BSL-3 facility using BSL-3 work practices.**<br><br>Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. |
| Additional Information | http://www.cdc.gov/coronavirus/mers/index.html,<br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html,<br>http://www.cdc.gov/coronavirus/mers/guidelines-lab-biosafety.html |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili |

(404) 639-2799
sgk5@cdc.gov

# Test Order

## MERS-CoV Serology

## CDC-10489

| | |
|---|---|
| Synonym(s) | Middle East Respiratory Syndrome Coronavirus (MERS-CoV) ELISA, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) EIA |
| **Pre-Approval Needed** | **Tatti, Kathleen, (404) 639-3797, ket2@cdc.gov**<br>**Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/coronavirus/mers/downloads/MERS-investigation-short-form.pdf** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum (single specimen collected >14 days after symptom onset; paired acute and convalescent). For more information go to http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html |
| Minimum Volume Required | 200µL |
| Storage & Preservation of Specimen Prior to Shipping | Collect whole blood in a serum separator tube. Allow the blood to clot, centrifuge briefly, and collect all the resulting sera in vials with external caps and internal O-ring seals. If there is no O-ring seal, then seal tightly with the available cap and secure with Parafilm. Do not collect specimen in heparin tubes. Store serum at 4°C. Serum may be frozen, if needed.<br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html,<br>http://www.cdc.gov/coronavirus/mers/guidelines-lab-biosafety.html |
| Transport Medium | None |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Contact Kathleen Tatti (404-639-3797, ket2@cdc.gov) or Dean Erdman (404-639-3727, dde1@cdc.gov) for shipping address.<br><br>See the following link for additional shipping information:<br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html |
| Methodology | ELISA |
| Turnaround Time | 3 Days |
| Interferences & Limitations | **Virus isolation in cell culture and initial characterization of viral agents recovered in cultures of MERS-CoV specimens are NOT recommended at this time. However, if done, these activities must be performed in a BSL-3 facility using BSL-3 work practices.**<br><br>Do not collect specimen in heparin tubes. |
| Additional Information | http://www.cdc.gov/coronavirus/mers/index.html,<br>http://www.cdc.gov/coronavirus/mers/guidelines-clinical-specimens.html,<br>http://www.cdc.gov/coronavirus/mers/guidelines-lab-biosafety.html |
| CDC Points of Contact | Kathleen Tatti<br>(404) 639-3797<br>ket2@cdc.gov<br>Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov |

# Test Order

## Microsporidia Molecular Identification

## CDC-10481

| | |
|---|---|
| Synonym(s) | *Anncaliia, Encephalitozoon cuniculi, Encephalitozoon hellem, Encephalitozoon intestinalis, Septata intestinalis, Tubulinosema, Enterocytozoon bieneusi, Nosema, Pleistophora, Trachipleistophora, Vittaforma corneae, Nosema corneum,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Tissue, urine, stool (unpreserved or in a PCR-compatible preservative e.g. EcoFix, UniFix, ZN-PVA, TotalFix, ethanol, potassium dichromate). Other specimen types can be accepted after consultation and pre-approval. |
| Minimum Volume Required | See Additional Information |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship unpreserved specimen on wet ice (cold pack) as an etiologic agent. Preserved/fixed specimens can be shipped at room temperature. |
| Methodology | Conventional PCR |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Stool specimens fixed in formalin-containing preservatives or LV-PVA are not suitable for molecular studies. |
| Additional Information | Minimum Volume Required: 0.5 g of stool or 1ml of urine or 25 mg tissue |
| CDC Points of Contact | Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov<br>Marcos de Almeida<br>(404) 718-4126<br>bnz0@cdc.gov |

# Test Order

*Moraxella* species ID

CDC-10140

| | |
|---|---|
| Synonym(s) | *Moraxella*, GNDC |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## MPIR - Study

## CDC-10428

| | |
|---|---|
| Synonym(s) | Anthrax TNA |
| **Pre-Approval Needed** | **Quinn, Conrad, (404) 639-2858, caq7@cdc.gov**<br>**Schiffer, Jarad, (404) 639-0894, aku3@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Paired acute and convalescent sera |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be separated from whole blood and kept at -80°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition including patient ID, date of collection, submitter information, and specimen ID number. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Contact laboratory prior to shipment.<br><br>Ship paired sera together and all frozen specimen should be shipped on dry ice |
| Methodology | Cell Based Serological Assay |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prefer non-hemolyzed specimen and non-lipemic specimen. If they are hemolyzed or lipemic, the specimen will not be tested. Plasma specimen are not accepted. Do not store or send specimen in tubes with preservatives or cell growth inhibitors. |
| Additional Information | None |
| CDC Points of Contact | Conrad Quinn<br>(404) 639-2858<br>caq7@cdc.gov<br>Jarad Schiffer<br>(404) 639-0894<br>aku3@cdc.gov |

# Test Order

## Mumps Detection and Genotyping

## CDC-10241

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Buccal swab, nasal swab, throat swab, urine, oral fluid and cerebrospinal fluid (CSF) |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | See: http://www.cdc.gov/mumps/lab/specimen-collect.html for detailed information on the storage and preservation of the specimen |
| Transport Medium | http://www.cdc.gov/mumps/lab/ |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | The laboratory requests that the sender contacts the laboratory by email or phone before shipping<br><br>See shipping instructions: http://www.cdc.gov/mumps/lab/<br><br>Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real time RT-PCR, Template production by RT-PCR, Viral culture, Genotyping by Nucleic acid sequencing |
| Turnaround Time | 7 Days |
| Interferences & Limitations | See: http://www.cdc.gov/mumps/lab/ for information on the interferences and limitations of this test |
| Additional Information | Please include vaccination history, age, date of symptom onset and date of sample collection<br><br>For additional information about mumps surveillance please see: http://www.cdc.gov/vaccines/pubs/surv-manual/chpt09-mumps.html |
| CDC Points of Contact | Paul Rota<br>(404) 639-4181<br>par1@cdc.gov<br>Rebecca McNall<br>(404) 639-4541<br>dqo2@cdc.gov |

# Test Order

## Mumps Neutralization Antibody (Not for Immune Status)

## CDC-10351

| | |
|---|---|
| Synonym(s) | PRN test, Plaque-reduction neutralization |
| **Pre-Approval Needed** | **Bellini, Bill, (404) 639-4183, wjb2@cdc.gov**<br>**Hickman, Carole, (404) 639-3339, cjh3@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired serum |
| Minimum Volume Required | 300 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated, not frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Provide a unique identifier on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Neutralization assay - quantitative serological assay |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Carole Hickman<br>(404) 639-3339<br>cjh3@cdc.gov |

# Test Order

## Mumps Serology

## CDC-10245

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 300 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated, not frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | CDC IgM Capture, Commercial indirect IgG |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Rheumatoid factor, Parainfluenza viruses 1, 2, and 3, Epstein-Barr virus, adenovirus, and Human Herpes Virus 6 have all been noted to interfere with mumps serologic assays. |
| Additional Information | IgM and IgG assays are qualitative assays<br><br>Please include vaccination history, age, date of onset and sample collection |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Carole Hickman<br>(404) 639-3339<br>cjh3@cdc.gov |

# Test Order

## Mumps Special Study

## CDC-10252

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Bellini, Bill, (404) 639-4183, wjb2@cdc.gov**<br>**Hickman, Carole, (404) 639-3339, cjh3@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Bill Bellini<br>(404) 639-4183<br>wjb2@cdc.gov<br>Carole Hickman<br>(404) 639-3339<br>cjh3@cdc.gov |

# Test Order

## *Mycobacterium* - Non-tuberculosis Mycobacteria Identification

## CDC-10225

| | |
|---|---|
| Synonym(s) | Non-TB Mycobacteria, Mycobacteria |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates demonstrated to not be part of the *Mycobacterium tuberculosis* complex<br>Isolates from the following specimens will be accepted for testing:<br>Sterile sites (e.g., blood, CSF, body fluids)<br>Abscess, exudate or skin lesion<br>Wounds or surgical sites (see Additional Information)<br>BAL/ bronch wash<br>Sputum (see Additional Information)<br>Gastric lavage (pediatric)<br>Animal and environmental isolates with prior consultation |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen at room temperature |
| Transport Medium | Lowenstein-Jensen or Middlebrook 7H10/7H11 agar |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries at room temperature as an etiologic agent. |
| Methodology | 16S Sequencing, MALDI-TOF, Phenotypic Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | Isolates from wounds or surgical sites must have documentation that NTM was abundant on primary culture (3+ to 4+) or was the only organism isolated.<br>Isolates from sputum must have documentation that the NTM was from two or more sputum cultures (collected on different days), was the only mycobacterial species present, and have abundant growth on primary culture. |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Nadege Toney<br>(404) 639-1282<br>ngc6@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Drug Susceptibility Testing

## CDC-10185

| | |
|---|---|
| Synonym(s) | MTB DST, TB, Tuberculosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure isolate on solid medium or in broth culture |
| Minimum Volume Required | Not applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Broth should not be shipped frozen. |
| Methodology | Agar proportion, Pyrazinamide (PZA) by MGIT 960 |
| Turnaround Time | 32 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Identification

## CDC-10187

| | |
|---|---|
| Synonym(s) | TB, Tuberculosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. |
| Methodology | Genetic based testing |
| Turnaround Time | 14 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Identification and Drug Susceptibility Testing

## CDC-10188

| | |
|---|---|
| Synonym(s) | TB, Tuberculosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure isolate on solid medium or in broth culture |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Broth should not be shipped frozen. |
| Methodology | Genetic based testing, Pyrazinamide (PZA) by MGIT 960, Agar Proportion |
| Turnaround Time | 32 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Identification and Pyrazinamide Susceptibility Testing

## CDC-10190

| | |
|---|---|
| Synonym(s) | TB, Tuberculosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure isolate on solid medium or in broth culture |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Broth should not be shipped frozen. |
| Methodology | Pyrazinamide (PZA) by MGIT 960, Genetic based testing |
| Turnaround Time | 32 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Molecular Detection of Drug Resistance (MDDR)

## CDC-10186

| | |
|---|---|
| Synonym(s) | MDDR, TB, Tuberculosis |
| **Pre-Approval Needed** | **Metchock, Beverly, (404) 639-2455, TBLab@cdc.gov**<br>**Driscoll, Jeff, (404) 639-2455, TBLab@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/tb/topic/laboratory/MDDRsubmissionform.pdf** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nucleic Acid Amplification positive (NAA+) sputum sediment or pure culture isolate on solid medium or in broth culture |
| Minimum Volume Required | 0.5 mL (sediment) |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Sediments and broth cultures should not be shipped frozen. |
| Methodology | Pyrosequencing, Sanger sequencing, Agar Proportion DST, MGIT 960 Pyrazinamide (PZA) |
| Turnaround Time | 3 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov<br>Jeff Driscoll<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex – Pyrazinamide Susceptibility Testing

## CDC-10189

| | |
|---|---|
| Synonym(s) | PZA DST, TB, Tuberculosis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure isolate on solid medium or in broth culture |
| Minimum Volume Required | Not applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | *Mycobacterium tuberculosis* (MTB) Growth Medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Broth should not be shipped frozen. |
| Methodology | Pyrazinamide (PZA) by MGIT 960 |
| Turnaround Time | 14 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex - Special Study

## CDC-10191

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Metchock, Beverly, (404) 639-2455, TBLab@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Beverly Metchock<br>(404) 639-2455<br>TBLab@cdc.gov |

# Test Order

## *Mycobacterium* TB Complex (International Only) Identification and Drug Susceptibility Testing

## CDC-10352

| | |
|---|---|
| Synonym(s) | Culture, DST, AST, MTB, MTB complex, TB, MDR TB, ID, Tuberculosis |
| **Pre-Approval Needed** | **Alexander, Heather, (404) 639-5331, drz5@cdc.gov**<br>**DeGruy, Kyle, (404) 639-0875, gsz4@cdc.gov** |
| **Supplemental Information Required** | **Supplemental form will be provided upon consultation**<br><br>**Fill out the ILB-100-F08C TB Requisition Form**<br><br>**CDC Form 0.753:**<br>**Application for Permit to Import or Transport Etiological Agents, Hosts, or Vectors of**<br>**Human Disease. It is a requirement to complete this form.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Suspected *Mycobacteria tuberculosis* Complex isolates in Middlebrook 7H9 liquid media or MGIT (7H9) broth inoculated with culture isolate |
| Minimum Volume Required | 0.3 mL |
| Storage & Preservation of Specimen Prior to Shipping | *Mycobacterium tuberculosis* Complex in Sterile 2.0 mL screw cap cryovial with O-ring. Specimen should be kept frozen at -70°C indefinitely, but specimen may be stored at -20°C for three months. |
| Transport Medium | Middlebrook or MGIT (7H9) broth should be inoculated with a culture isolate of a suspected *Mycobacterium tuberculosis* Complex and transported in a sterile 2.0 mL screw cap cryovial with O-ring. |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | Keep specimen frozen at -70°C or lower by using dry ice.<br><br>Refer to *Mycobacterium tuberculosis* Isolate Preparation & Shipments on page 7 of International Laboratory Branch Test Directory or contact laboratory prior to submission. |
| Methodology | Phenotypic and genotypic ID with reflex to drug susceptibility |
| Turnaround Time | 150 Days |
| Interferences & Limitations | Nonviable isolates sent for phenotypic DST and contaminated or mixed isolates sent for phenotypic DST will interfere with the test.<br><br>Specimen can be rejected if improperly labeled or unlabeled, insufficient volume for testing, without documentation or with discrepant documentation, and have leaked in transit or otherwise show evidence of contamination. |
| Additional Information | Turn around time is dependent on batch orders:<br><br>Batches with less than 100 specimens within 150 days<br>Batches with greater than 100, contact Heather Alexander, drz5@cdc.gov. |

| | |
|---|---|
| | Drug Susceptibility Testing on *Mycobacterium tuberculosis* complex performed for first line drugs streptomycin, isoniazid, rifampicin, ethambutol, and pyrazinamide on the BD BACTEC™MGIT™ 960 system and for isoniazid and rifampicin on molecular line probe assay. Drug Susceptibility Testing on *Mycobacterium tuberculosis* complex performed for second line drugs with the modified method of proportion for streptomycin, isoniazid, rifampicin, ethambutol, rifabutin, PAS, ciprofloxacin, ofloxacin, kanamycin, ethionamide, capreomycin, and amikacin. Genotype MTBDRsl tests second line drugs are ofloxacin, ciprofloxacin, moxifloxacin, amikacin, kanamycin, capreomycin, viomycin and ethambutol. |
| CDC Points of Contact | Heather Alexander<br>(404) 639-5331<br>drz5@cdc.gov<br>Kyle DeGruy<br>(404) 639-0875<br>gsz4@cdc.gov<br><br>Zilma Rey<br>(404) 639-2345<br>yzr0@cdc.gov |

# Test Order

*Mycobacterium* TB Complex (International Only) Special Study

CDC-10353

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Alexander, Heather, (404) 639-5331, drz5@cdc.gov**<br>**DeGruy, Kyle, (404) 639-0875, gsz4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | All primary specimen containers must include 2 unique identifiers at the time of collection. The identifiers must be clearly labeled on each specimen and correspond to information on the requisition form.<br><br>Surveillance studies and some protocols require 1 unique identifier (the ILB recommends 2 identifiers) de-linked from the patient. Do not include the patient's name or any other personally identifiable information. Results are not reported back to patient. |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | |
| CDC Points of Contact | Heather Alexander<br>(404) 639-5331<br>drz5@cdc.gov<br>Kyle DeGruy<br>(404) 639-0875<br>gsz4@cdc.gov<br><br>Zilma Rey<br>(404) 639-2345<br>yzr0@cdc.gov |

# Test Order

## *Mycoplasma pneumoniae* Molecular Detection

## CDC-10155

| | |
|---|---|
| Synonym(s) | Walking pneumonia, Atypical pneumonia, Community Acquired Pneumoniae (CAP) |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal (NP) and/or Oropharyngeal (OP) swabs, and any lower respiratory tract specimen including bronchoalveolar lavage (BAL) and sputum; tissue, cerebral spinal fluid , isolates and purified nucleic acid; Others upon consultation with laboratory. |
| Minimum Volume Required | Contingent upon specimen type. Please call for consultation |
| Storage & Preservation of Specimen Prior to Shipping | Specimens can be kept refrigerated if shipped in less than 72 hours of collection; otherwise specimen should be kept frozen. Store swabs in universal transport medium. |
| Transport Medium | Universal transport medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be sent on ice packs<br>Frozen specimen should be sent on dry ice |
| Methodology | Real Time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Do not use cotton swabs with wooden shafts. Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | None |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

*Mycoplasma* species Study

CDC-10156

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Wang, Xin, (404) 639-5474, gqe8@cdc.gov**<br>**Patel, Manisha, (404) 639-2422, dvn4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Xin Wang<br>(404) 639-5474<br>gqe8@cdc.gov<br>Melissa Whaley<br>(404) 639-3920<br>dbq3@cdc.gov |

# Test Order

## *Naegleria* Molecular Detection

## CDC-10482

| | |
|---|---|
| Synonym(s) | Free-living ameba, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | For *Naegleria fowleri* molecular detection, CSF is the preferred specimen type. For *Acanthamoeba* and *Balamuthia* molecular detection, tissue is the preferred specimen type; however, these amoebae can occasionally be detected in cerebrospinal fluid (CSF). |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. In addition to two patient identifiers (sex, date of birth, name, etc.), provide specimen type and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Conventional PCR, Real-Time PCR |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Formalin fixed specimens are not suitable for molecular studies |
| Additional Information | None |
| CDC Points of Contact | Jennifer Cope<br>(404) 718-4878<br>bjt9@cdc.gov<br>Ibne Ali<br>(404) 718-4157<br>xzn5@cdc.gov |

# Test Order

## NARMS Susceptibility Testing

## CDC-10107

| | |
|---|---|
| Synonym(s) | National Antimicrobial Resistance Monitoring System, NARMS surveillance |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Submitter must be a NARMS participating laboratory. Specimens accepted according to current National Antimicrobial Resistance Monitoring System (NARMS) sampling scheme. NARMS log sheet or entry into NARMS web interface.** |
| **Supplemental Form** | https://wwwn.cdc.gov/NARMS/UserLogin.aspx |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Isolates. Specimens accepted according to NARMS guidelines |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Please refer to guidance for specific organism |
| Specimen Labeling | State or local public health laboratory number |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries.<br><br>Please refer to guidance for specific organism. |
| Methodology | Broth Microdilution Antimicrobial Susceptibility (AST), E-Test Susceptibility Testing |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | The turn around time depends on the nature of subtyping performed; and, results are typically reported directly to the surveillance databases. |
| CDC Points of Contact | Kevin Joyce<br>(404) 639-1944<br>kdj7@cdc.gov<br>Patricia Jones<br>(404) 639-3334<br>entericbacteria@cdc.gov<br><br>Regan Rickert<br>(404) 639-3479<br>gqv9@cdc.gov<br>Michael Korth<br>(404) 639-2099<br>mqk8@cdc.gov |

# Test Order

## *Neisseria* (STD) Identification

## CDC-10101

| | |
|---|---|
| Synonym(s) | *Neisseria*, GC |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Genital, pharyngeal, and/or rectal swabs. In addition, bacterial culture or isolate on appropriate culture media |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specimen needs to be stored in a manner that will maintain viability of gonorrhea |
| Transport Medium | Any acceptable medium for gonorrhea transport |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent. |
| Methodology | Phenotypic identification |
| Turnaround Time | 1 Week |
| Interferences & Limitations | Anything that can affect viability of gonorrhea will adversely affect the test results |
| Additional Information | Please provide information on any antibiotics the patient may have been treated with |
| CDC Points of Contact | John Papp<br>(404) 639-3785<br>jwp6@cdc.gov<br>Kevin Pettus<br>(404) 639-4338<br>kbp9@cdc.gov |

# Test Order

*Neisseria gonorrhoeae* Study

CDC-10103

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Papp, John, (404) 639-3785, jwp6@cdc.gov**<br>**Pettus, Kevin, (404) 639-4338, kbp9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | John Papp<br>(404) 639-3785<br>jwp6@cdc.gov<br>Kevin Pettus<br>(404) 639-4338<br>kbp9@cdc.gov |

# Test Order

## *Neisseria gonorrhoeae* Susceptibility Testing

## CDC-10102

| | |
|---|---|
| Synonym(s) | *Neisseria* AST, GC Susceptibility |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Required: Patient demographics and recent travel history.** |
| **Supplemental Form** | http://www.cdc.gov/std/gisp/CDC73.60AGonococcal.pdf |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Genital, pharyngeal, and/or rectal swabs. In addition, bacterial culture or isolate on appropriate growth media |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specimen needs to be stored in a manner that will maintain viability of gonorrhea |
| Transport Medium | Any acceptable medium for gonorrhea transport |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent. |
| Methodology | Agar Plate Dilution, E-test, Disk Diffusion |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Anything that can affect viability of gonorrhea will adversely affect the test results |
| Additional Information | Please provide information on any antibiotics the patient may have been treated with |
| CDC Points of Contact | John Papp<br>(404) 639-3785<br>jwp6@cdc.gov<br>Kevin Pettus<br>(404) 639-4338<br>kbp9@cdc.gov |

# Test Order

## *Neisseria meningitidis* Identification and Serogrouping

## CDC-10219

| | |
|---|---|
| Synonym(s) | *N. meningitidis* ID and SASG |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate, frozen stock, primary specimen such as CSF, whole blood, serum, and other sterile site specimen types upon consultation. |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Store slants at ambient temperature. Primary specimens and stocks should be frozen. |
| Transport Medium | Chocolate agar slants are preferred (plates not recommended) or frozen stock. |
| Specimen Labeling | Tests subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. Label ABCs/Enhanced Surveillance specimens with the state ID & accession number. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. May ship Friday's with prior approval only.<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | Growth, Morphology, Biochemical Testing, Slide Agglutination Serogrouping, Real-time PCR |
| Turnaround Time | 30 Days |
| Interferences & Limitations | Improperly temperature controlled specimens/isolates can give false negative results. |
| Additional Information | None |
| CDC Points of Contact | Brian Harcourt<br>(404) 639-2842<br>beh0@cdc.gov<br>Susanna Schmink<br>(404) 639-5005<br>zma6@cdc.gov<br><br>Meningitis Laboratory<br>(404) 639-1380 |

# Test Order

*Neisseria meningitidis* Study

CDC-10220

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Wang, Xin, (404) 639-5474, gqe8@cdc.gov**<br>**Patel, Manisha, (404) 639-2422, dvn4@cdc.gov** |
| **Supplemental Information Required** | **Brief description of study or surveillance program.**<br><br>**Supplemental Form Required: CDC Meningitis Laboratory: Molecular Typing Request Submission Form (provided upon request by CDC Meningitis Laboratory).** |
| **Supplemental Form** | |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate or frozen stock. |
| Minimum Volume Required | N/A |
| Storage & Preservation of Specimen Prior to Shipping | Store slants at ambient temperature. Stocks should be kept frozen. |
| Transport Medium | Chocolate agar slants or frozen stocks. |
| Specimen Labeling | Tests subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. May ship on Fridays with prior approval only. |
| Methodology | Pulsed Field Gel Electrophoresis (PFGE), Multilocus Sequence Typing (MLST), molecular typing of the outer membrane protein genes porB and fetA, molecular typing of the vaccine candidates porA, nhbA, nadA, and fHbp, other testing |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Xin Wang<br>(404) 639-5474<br>gqe8@cdc.gov<br>Melissa Whaley<br>(404) 639-3920<br>dbq3@cdc.gov |

# Test Order

## *Neisseria* species (Not GC or *meningococcus*) ID

## CDC-10139

| | |
|---|---|
| Synonym(s) | *Neisseria*, GNDC |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Nipah Virus Identification

## CDC-10354

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Nipah Virus Serology

## CDC-10355

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

*Nocardia* species ID

CDC-10150

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## *Nocardia* species ID and AST

## CDC-10151

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please notify laboratory prior to shipment if this is a critical care specimen** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; consultation required for other sample/specimen types |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated if unable to ship immediately |
| Transport Medium | Suitable agar slant medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight to avoid weekend deliveries |
| Methodology | Primary Culture based on specimen type, MALDI-TOF, 16S sequence based identification, AST by broth microdilution |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | The 3 week turnaround time applies to all tests unless biochemical and/or phenotypic analysis are required, which could take up to 2 months for test results. |
| Additional Information | If available, please provide patient history including if the patient has used a catheter and/or if the patient is immunocompromised. |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Norovirus Genotyping

## CDC-10356

| | |
|---|---|
| Synonym(s) | Norovirus |
| **Pre-Approval Needed** | **Vinje, Jan, (404) 639-3721, ahx8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool, environmental swab |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be stored at 2°-8°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Jan Vinje<br>(404) 639-3721<br>ahx8@cdc.gov<br>Nicole Gregoricus<br>(404) 639-1923<br>frv6@cdc.gov |

# Test Order

## Norovirus Molecular Detection

## CDC-10357

| | |
|---|---|
| Synonym(s) | Norovirus |
| **Pre-Approval Needed** | **Vinje, Jan, (404) 639-3721, ahx8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool, environmental swab |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be stored at 2°-8°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Jan Vinje<br>(404) 639-3721<br>ahx8@cdc.gov<br>Nicole Gregoricus<br>(404) 639-1923<br>frv6@cdc.gov |

# Test Order

## Norovirus Molecular Detection and Genotyping

## CDC-10358

| | |
|---|---|
| Synonym(s) | Norovirus |
| **Pre-Approval Needed** | **Vinje, Jan, (404) 639-3721, ahx8@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool, environmental swab |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be stored at 2°-8°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Jan Vinje<br>(404) 639-3721<br>ahx8@cdc.gov<br>Nicole Gregoricus<br>(404) 639-1923<br>frv6@cdc.gov |

# Test Order

## *Orientia* Molecular Detection

## CDC-10359

| | |
|---|---|
| Synonym(s) | Scrub Typhus |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:<br>-Symptom onset date<br>-Sample collection date<br>-Type of infection<br>-Status of illness<br>Recommended:<br>-Travel history<br>-Exposure history<br>-Therapeutic agents<br>-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Acute samples only, anticoagulated whole blood collected in Ethylenediaminetetraacetic acid (EDTA) treated tubes preferred; serum; fresh tissue biopsy |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Ethylenediaminetetraacetic acid (EDTA) blood tubes for blood; tissue in a sample collection tube |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Real Time Polymerase Chain Reaction (PCR), Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Hemolysis in whole blood specimen will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. If a specimen is drawn at convalescence it will reduce the chance of the target organism being present in blood. Avoid collection of blood specimen in heparin tubes. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

*Orientia* Serology

CDC-10360

| | |
|---|---|
| Synonym(s) | Scrub Typhus |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:<br>-Symptom onset date<br>-Sample collection date<br>-Type of infection<br>-Status of illness<br>Recommended:<br>-Travel history<br>-Exposure history<br>-Therapeutic agents<br>-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Indirect Fluorescence Assay (IFA) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact laboratory prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial lab. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## Paragonimiasis Immunoblot

## CDC-10465

| | |
|---|---|
| Synonym(s) | *Paragonimus westermani*; *Paragonimus kellicotti,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and previous test results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | Immunoblot, Western Blot, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Parasite - Morphologic Identification (O+P)

## CDC-10234

| | |
|---|---|
| Synonym(s) | Parasitology, Malaria parasite identification, Blood parasite, ova and parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Supplemental form not needed** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool specimens, blood, and tissue. Additional acceptable specimens are listed on the supplemental link. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Storage and preservation is specimen specific, see supplemental link |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries<br>Shipping is specimen specific see supplemental link |
| Methodology | Microscopy |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Blaine Mathison<br>(404) 718-4103<br>gqa4@cdc.gov<br>Henry Bishop<br>(404) 718-4102<br>hsb2@cdc.gov |

# Test Order

## Parasite - Special Study

## CDC-10237

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **McAuliffe, Isabel, (404) 718-4100, ibm4@cdc.gov**<br>**Qvarnstrom, Yvonne, (404) 718-4123, bvp2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov |

# Test Order

## Parechovirus Detection and Identification

## CDC-10362

| | |
|---|---|
| Synonym(s) | Human parechovirus, HPEV, Echovirus 22, Echovirus 23, Ljungan virus, parechovirus |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Specimens include stool, serum, throat or nasal swab, cerebrospinal fluid (CSF), vesicle fluid or lesion, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs. Fresh or frozen tissues are preferred to Formalin fixed tissues, but will accept both. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Vesicle fluid, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs:<br>Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. Place the swab immediately into a sterile viral containing 2mL of viral transport media without antibiotics, if possible.<br><br>Stool: Collect in a clean, dry, leak-proof container.<br><br>Serum: For each serum specimen, collect whole blood into a serum separator tube (marble or tiger top SST). Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| Transport Medium | Viral transport medium. If you do not have viral transport media, place the swab into a sterile vial without viral transport media. Aseptically, cut or break applicator sticks off near the tip to permit tightening of the cap. For NP/OP swabs, both swabs can be placed in the same vial, if desired. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent.<br><br>Include the full name, title, complete mailing address, email address, telephone, and fax number of the submitter. This will be the person to whom the final report will be mailed to. |
| Methodology | Molecular techniques |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Collecting specimens during the first week of illness is ideal although the virus can be shed in stool for several weeks. A specimen set collected in the second week of illness should include a rectal swab or stool sample. |
| Additional Information | Minimum volume for cell culture is 0.5-1 mL, for CSF is 60 uL, and for fresh frozen tissues is 2 mm^2.<br><br>Stool: Stool may be collected within 14 days of symptom onset. Collect 10-20 g of stool in a clean, dry, leak-proof container. |

| | |
|---|---|
| | Serum: For each serum specimen, collect (adults and children >6kg: 5 mL, children <6 kg: 2 mL) of whole blood into a serum separator tube (marble or tiger top SST). A minimum of 1 mL of whole blood is needed for testing of pediatric patients. Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| CDC Points of Contact | Alan Nix<br>(404) 639-1689<br>wbn0@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Parvovirus B19 Molecular Detection

## CDC-10363

| | |
|---|---|
| Synonym(s) | Fifth Disease |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, blood, plasma, and amniotic fluid |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate all specimens promptly after collection. If specimens can be shipped to CDC within 72 hours of collection, they should be kept refrigerated at 4°C and shipped on gel ice-packs. If specimens must be held for >72 hours, they should be promptly frozen at -70°C and shipped on dry ice. Liquid specimens should be aliquoted into properly labeled, leak-proof, unbreakable screw cap vials. Samples should be collected and processed in a manner that prevents cross-contamination between specimens, including changing gloves between specimens. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Do not use wooden-shafted swabs or calcium alginate swabs |
| Additional Information | None |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## Parvovirus B19 Serology

## CDC-10364

| | |
|---|---|
| Synonym(s) | Fifth Disease |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate all specimens promptly after collection. If specimens can be shipped to CDC within 72 hours of collection, they should be kept refrigerated at 4°C and shipped on gel ice-packs. If specimens must be held for >72 hours, they should be promptly frozen at -70°C and shipped on dry ice. Liquid specimens should be aliquoted into properly labeled, leak-proof, unbreakable screw cap vials. Samples should be collected and processed in a manner that prevents cross-contamination between specimens, including changing gloves between specimens. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | IgG and IgM enzyme immunoassay |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Do not collect in heparin tubes |
| Additional Information | None |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## Pathologic Evaluation of CNS Infections

## CDC-10365

| | |
|---|---|
| Synonym(s) | Central Nervous Tissue, autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | The preferred specimens include paraffin blocks of involved CNS tissue, or representative tissues (See Additional Information section) in formalin. Fresh-frozen tissue may also be submitted. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal) should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing.<br><br>Possible tissue sites include cerebralcortex (frontal, parietal, temporal, and |

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| | occipital), brain stem (midbrain, pons, medulla) and spinal cord, cerebellum, basal ganglia, thalamus, hypothalamus, and hippocampus, and meninges. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Influenza and Other Viral Infections

## CDC-10366

| | |
|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Representative blocks or fixed tissue specimen of upper and lower respiratory and tissue showing pathology. Formalin-fixed paraffin embedded blocks made from BAL can also be submitted for IHC staining. Fresh-frozen tissue may also be submitted. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing. |

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| | The recommended pulmonary sites include central (hilar) lung with segmental bronchi, right and left primary bronchi, trachea (proximal and distal), representative pulmonary parenchyma from right and left lung, for patients with suspected myocarditis, encephalitis, or rhabdomyolysis, specimens should include myocardium (right and left ventricle), CNS (cerebral cortex, basal ganglia, pons, medulla, and cerebellum, and skeletal muscle, respectively, and specimens should be included from any other organ showing significant gross or microscopic pathology. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Myocarditis

## CDC-10367

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|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Minimum of 2 paraffin blocks of involved heart tissue, or representative tissues in formalin (i.e. wet tissue). Fresh-frozen tissue may also be submitted for culture and molecular-based assays. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing.<br><br>Specific guidelines for these samples include multiple fragments of cardiac |

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| | tissue representing each anatomic portion of the heart involved by inflammatory infiltrates (e.g., ventricles, epicardium, pericardium), and if myocarditis is identified in the context of a systemic illness, representative tissues should be included from ay other organ showing significant microscopic pathology. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Pneumonia and Other Respiratory Infections

## CDC-10368

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|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Representative (minimum of 8) blocks and fixed tissue representing different pulmonary sites and other organs showing pathology. Formalin-fixed paraffin embedded blocks made from BAL can also be submitted. Fresh-frozen tissue may be submitted. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing. |

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| | The preferred pulmonary sites include hilar lung with segmental bronchi, primary bronchi, and trachea, peripheral pulmonary parenchyma from both lungs and specimens should be included from any other organ showing significant gross or microscopic pathology. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Rash and Eschar-Associated Illness

## CDC-10369

| | |
|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Representative (minimum 1) paraffin block of the cutaneous lesion, or an appropriate biopsy specimen in formalin (i.e. wet tissue). Fresh-frozen tissue may also be submitted for culture and molecular based assays. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing.<br><br>Specific guidelines for the samples include minimally, a 3 mm punch, deep |

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| | shave, or excisional biopsy specimen from the eschar or a representative rash lesion. If multiple stages or forms of cutaneous lesions are identified, multiple biopsies should be submitted, and if a rash is identified in the context of a systemic fatal illness, representative tissues should be included from any other organ showing significant gross or microscopic pathology. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Select Hepatides

## CDC-10370

| | |
|---|---|
| Synonym(s) | pathologic evaluation of tissue, autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Representative (minimum of 2) paraffin blocks of involved hepatic tissue and representative tissues in formalin. Fresh-frozen tissue may also be submitted and epoxy-embedded tissues. Other major organs as applicable and others upon consultation. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen are frozen, send separately on dry ice. If specimen are refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing. |

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| | Specific guidelines for these samples include multiple fragments of liver tissue involved by inflammatory infiltrates and if hepatitis is identified in the context of systemic illness, representative tissues should be included from any other organ showing significant microscopic pathology. |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Sudden Unexplained Infant Death with Suspicion of Infection

## CDC-10371

| | |
|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Tissues should be collected in accordance with the National Association of Medical Examiners (NAME) protocol for a complete SUID autopsy. Tissue from the organ(s) demonstrating pathology and major organs without apparent histopathologic changes. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimen is frozen, send separately on dry ice. If specimen is refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing. |

# Test Order

## Pathologic Evaluation of Sudden Unexplained Infant Death with Suspicion of Infection

## CDC-10371


| | |
|---|---|
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathologic Evaluation of Unexplained Illness Due to Possible Infectious Etiology

## CDC-10372

| | |
|---|---|
| Synonym(s) | Autopsy, biopsy, formalin fixed tissues, fresh and frozen tissues, tissue culture, pathology, paraffin blocks, histopathology, electron microscopy, immunohistochemistry, PCR |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **Please include a cover letter outlining a brief clinical history, including relevant demographic/epidemiologic information, a copy of (a) the autopsy report (preliminary or final) or (b) surgical pathology/report, copies of pertinent results (microbiology, hematology, serology, culture, and/or biochemical) and images (clinical and/or gross autopsy photos).**<br><br>**Please include a key to the identification of the blocks** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/idpb/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Representative tissues from all organs showing microscopic pathology. Preferred specimens include paraffin blocks of tissues showing gross or microscopic pathology and representative tissues in formalin. Fresh-frozen tissue may also be submitted. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specifics will be determined upon consultation. In general, paraffin-embedded tissue blocks should be submitted where tissues have been in formalin for a significant time, wet tissue should be in 10% neutral buffered formalin, unstained slides (not optimal), should be cut at 3-5 microns (10 slides per block), and Electron Microscopy specimen should be fixed in glutaraldehyde and held in phosphate buffer. |
| Transport Medium | Electron Microscopy specimen containers should be filled to the top with phosphate buffer and sent on wet ice. Do not freeze. |
| Specimen Labeling | Specimen (block) key, denoting tissue type is extremely helpful and will expedite results |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight. If specimens are frozen, send separately on dry ice. If specimens are refrigerated, ship on frozen gel packs. For urgent cases, please contact laboratory immediately. During hot weather, to avoid melting of paraffin blocks, they should be packed on ice packs. Do not pack wet tissue and frozen tissue together, please package separately to avoid freezing and damage of wet tissue. Please include the full name, title, complete mailing address, e-mail address, and telephone and fax numbers of the submitter. This will be to whom the final pathology report is addressed. |
| Methodology | Histopathology, H&E's and Special Stains, Immunohistochemistry (IHC), Polymerase Chain Reaction (PCR) and Sequencing, Electron Microscopy (EM), Tissue Culture, Nucleic Acid Extraction for transfer to SME |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Prolonged fixation (>2 weeks) may interfere with some immunohistochemical and molecular diagnostic assays |
| Additional Information | Preliminary results are usually reported within 1 week, but may take up to 2 weeks depending on the nature of the case.<br><br>Images are especially important in evaluation and guiding of testing. |

# Test Order

## Pathologic Evaluation of Unexplained Illness Due to Possible Infectious Etiology

## CDC-10372


| | |
|---|---|
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Pathology Special Study

## CDC-10373

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Zaki, Sherif, (404) 639-3133, szaki@cdc.gov**<br>**Blau, Dianna, (404) 639-1495, Pathology@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | To be determined |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Sherif Zaki<br>(404) 639-3133<br>szaki@cdc.gov<br>Dianna Blau<br>(404) 639-1495<br>pathology@cdc.gov |

# Test Order

## Picornavirus Detection and Identification (not Hepatitis A, not Rhinovirus)

## CDC-10374

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|---|---|
| Synonym(s) | Theier's murine encephalomyelitis virus (TMEV), Saffold virus (SAFV), Cosavirus (COSV) (Dekavirus), Salivirus (SALV) (Klassevirus), Kobuvirus, Aichi virus, Encephalomyocarditis virus (EMCV), Vilyuisk virus |
| **Pre-Approval Needed** | **Nix, Alan, (404) 639-1689, wbn0@cdc.gov**<br>**Oberste, Steve, (404) 639-5497, mbo2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Specimens include stool, serum, throat or nasal swab, cerebrospinal fluid (CSF), vesicle fluid or lesion, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs. Fresh or frozen tissues are preferred to Formalin fixed tissues, but will accept both. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Vesicle fluid, rectal, or nasopharyngeal (NP)/oropharyngeal (OP) swabs:<br>Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. DO NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. Place the swab immediately into a sterile viral containing 2mL of viral transport media without antibiotics, if possible.<br><br>Stool: Collect in a clean, dry, leak-proof container.<br><br>Serum: For each serum specimen, collect whole blood into a serum separator tube (marble or tiger top SST). Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| Transport Medium | Viral transport medium. If you do not have viral transport media, place the swab into a sterile vial without viral transport media. Aseptically, cut or break applicator sticks off near the tip to permit tightening of the cap. For NP/OP swabs, both swabs can be placed in the same vial, if desired. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent.<br><br>Include the full name, title, complete mailing address, email address, telephone, and fax number of the submitter. This will be the person to whom the final report will be mailed to. |
| Methodology | Molecular techniques |
| Turnaround Time | 14 Days |
| Interferences & Limitations | Collecting specimens during the first week of illness is ideal although the virus can be shed in stool for several weeks. A specimen set collected in the second week of illness should include a rectal swab or stool sample. |
| Additional Information | Minimum volume for cell culture is 0.5-1 mL, for CSF is 60 uL, and for fresh frozen tissues is 2 mm^2. |

| | |
|---|---|
| | Stool: Stool may be collected within 14 days of symptom onset. Collect 10-20 g of stool in a clean, dry, leak-proof container.<br><br>Serum: For each serum specimen, collect (adults and children >6 kg: 5 mL, children <6 kg: 2 mL) of whole blood into a serum separator tube (marble or tiger top SST). A minimum of 1 mL of whole blood is needed for testing of pediatric patients. Allow to clot at room temperature for a minimum of 30 minutes and centrifuge. |
| CDC Points of Contact | Alan Nix<br>(404) 639-1689<br>wbn0@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Picornavirus Special Study

## CDC-10375

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Nix, Alan, (404) 639-1689, wbn0@cdc.gov**<br>**Oberste, Steve, (404) 639-5497, mbo2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Alan Nix<br>(404) 639-1689<br>wbn0@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Polio Isolation, Intratypic Differentiation, Genotyping

## CDC-10376

| | |
|---|---|
| Synonym(s) | PV polio virus, ITD, Polio sequencing, AFP acute flaccid paralysis |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Stool, tissue culture, isolate, Fast Technology for Analysis of nucleic acids (FTA) cards, less common clinical specimens include nasopharyngeal and rectal swabs and cerebrospinal fluid (CSF) |
| Minimum Volume Required | 50 uL (tissue culture) |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent. |
| Methodology | Molecular techniques, Cell culture |
| Turnaround Time | 21 Days |
| Interferences & Limitations | None |
| Additional Information | If case investigation form is readily available, please submit with specimen |
| CDC Points of Contact | Cara Burns<br>(404) 639-5499<br>zqd1@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Polio Serology

## CDC-10377

| | |
|---|---|
| Synonym(s) | Neutralization assay, NT, MNT |
| **Pre-Approval Needed** | **Weldon, William, (404) 639-5485, wiw4@cdc.gov**<br>**Oberste, Steve, (404) 639-5497, mbo2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Needs to be collected from clotted whole blood or through serum separated tubes (SST). Serum needs to be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice as an etiologic agent. |
| Methodology | Neutralization assay |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | Red blood cell hemolysis will adversely affect test results |
| Additional Information | None |
| CDC Points of Contact | William Weldon<br>(404) 639-5485<br>wiw4@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Polio Special Study

## CDC-10378

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Burns, Cara, (404) 639-5499, zqd1@cdc.gov**<br>**Oberste, Steve, (404) 639-5497, mbo2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cara Burns<br>(404) 639-5499<br>zqd1@cdc.gov<br>Steve Oberste<br>(404) 639-5497<br>mbo2@cdc.gov |

# Test Order

## Poxvirus - Cowpox Specific Molecular Detection

## CDC-10379

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Encephalitis Work-Up (Post Vaccinia Encephalitis, Monkeypox, etc.)

## CDC-10380

| | |
|---|---|
| Synonym(s) | Monkeypox, Post-vaccinial encephalitis |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Cerebrospinal fluid (CSF) and serum must be submitted |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated. Serum should be collected in a venous blood tube containing a clot activator and/or gel. Blood tubes should be spun prior to shipment or an aliquot of the collected serum can be shipped. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | ELISA, Real Time PCR |
| Turnaround Time | 2 Days |
| Interferences & Limitations | In order to accurately interpret test results generated from CSF specimens, paired serum must be submitted |
| Additional Information | Turnaround time:<br>Urgent cases<br>- Testing is completed within 48 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>- Testing is completed within 5-7 days of specimen receipt.<br>For serology testing, please notify the lab prior to shipment so reagents can be prepared |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Molluscum Contagiosum Specific Molecular Detection

## CDC-10381

| | |
|---|---|
| Synonym(s) | MCV |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Monkeypox Specific Molecular Detection

## CDC-10382

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Orthopoxvirus Serology (Includes Vaccinia virus)

## CDC-10384

| | |
|---|---|
| Synonym(s) | Orthopoxvirus, Vaccincia Antibody detection |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired sera |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen refrigerated. Serum should be collected in a venous blood tube containing a clot activator and/or gel. Blood tubes should be spun prior to shipment or an aliquot of the collected serum can be shipped. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | ELISA |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Collection in either heparin and/or EDTA will interfere with results |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed within 48 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed within 5-7 days of specimen receipt.<br>For serology testing, please notify the lab prior to shipment so reagents can be prepared |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Pan-Poxvirus Molecular Detection (Human Infections)

## CDC-10385

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Parapoxvirus Generic Molecular Detection

## CDC-10383

| | |
|---|---|
| Synonym(s) | Sore mouth, scabby mouth, contagious ecthyma |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Parapoxvirus Molecular Detection

## CDC-10386

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Sealpox Specific Molecular Detection

## CDC-10387

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Smallpox (Variola Virus) Specific Molecular Detection

## CDC-10388

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **DEOC, , (770) 488-7100,** |
| **Supplemental Information Required** | **Call CDC Emergency Operations Center prior to contacting laboratory 770-488-7100** |
| **Supplemental Form** | http://www.bt.cdc.gov/agent/smallpox/ |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material, serum, and blood must all be submitted. Lesion fluid and/or material: vesicle / pustule skin or fluid, scab, crust, etc.; collection method: touch prep slide, swab, biopsy |
| Minimum Volume Required | 1 mL (blood and serum) |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be collected in a venous blood tube containing a clot activator and/or gel. Blood tubes should be spun prior to shipment or an aliquot of the collected serum can be shipped. Whole blood should be collected in a blood tube containing ethylenediaminetetraacetic acid (EDTA).<br><br>Keep specimen refrigerated. It is extremely important not to cross-contaminate specimens (i.e., one specimen per container). Viral transport media should not be added to specimens. All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Approval must be obtained prior to the shipment of potential smallpox patient clinical specimens to CDC |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Cotton swabs may cause PCR inhibition and should not be used. Heparin may cause PCR inhibition and should not be used to collect whole blood. |
| Additional Information | A suspected case of smallpox must be immediately reported to appropriate local, state, or territorial health departments. After review, if smallpox is still suspected, the case should be immediately reported to CDC's Emergency Operations Center.<br><br>Specimens should be collected as outlined in Guide D on the CDC website: Http://www.bt.cdc.gov/agent/smallpox/response-plan/files/guide-d.pdf |
| CDC Points of Contact | DEOC<br>(770) 488-7100 |

# Test Order

## Poxvirus - Tanapox Specific Molecular Detection

## CDC-10389

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Poxvirus - Vaccinia Specific Molecular Detection

## CDC-10390

| | |
|---|---|
| Synonym(s) | Smallpox Vaccine |
| **Pre-Approval Needed** | **Help Desk, , (404) 639-4129,** |
| **Supplemental Information Required** | **Clinical consultation with the Poxvirus Program is required prior to specimen shipment to determine testing urgency. A supplemental form will be supplied after initial consultation.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Lesion fluid and/or material: vesicle/pustule skin or fluid, scab, crust, etc.<br>Collection method: fresh or frozen, swab, biopsy, touch prep slides, formalin fixed, paraffin block. Swabs should be made of nylon, polyester, or Dacron material. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | All specimens should be stored at 4ºC until shipment. Swabs without individual holders may be stored in a sterile container. Dry swabs are preferred but a minimal amount of viral transport media may be added. |
| Transport Medium | Prefer swabs dry but will accept specimen in a minimum viral transport medium |
| Specimen Labeling | Specimens should be labeled with patient name, specimen type, date of collection, and body location |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Real Time-PCR |
| Turnaround Time | 1 Day |
| Interferences & Limitations | Swabs intended for the collection and transport of bacterial specimens should not be used. Cotton swabs may cause PCR inhibition and should not be used. The addition of viral transport media to swab specimens will dilute any viral DNA present. |
| Additional Information | Turnaround time:<br>Urgent cases<br>-Testing is completed and reported within 24 hours of specimen receipt when results directly impact patient care;<br>Routine cases<br>-Testing is completed and reported within 5 business days of specimen receipt.<br>Formalin fixed material is first tested by the Infectious Disease Pathology Branch (IDPB) and will only identify poxviruses to the genus level. DNA may be extracted from paraffin block embedded lesion material and tested by the Poxvirus Program. Fresh, non-frozen tissue is preferred by IDPB. |
| CDC Points of Contact | Help Desk<br>(404) 639-4129 |

# Test Order

## Puumala Serology

## CDC-10391

| | |
|---|---|
| Synonym(s) | Hanta, HFRS, Nephropathia epidemica |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Rabies Antemortem Human Testing

## CDC-10392

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **www.cdc.gov/rabies/specific_groups/laboratories/index.html** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | All four of the following are required for testing: serum, CSF, nuchal (skin) biopsy, and saliva |
| Minimum Volume Required | 500 uL (serum, CSF, saliva) |
| Storage & Preservation of Specimen Prior to Shipping | Keep all samples stored at -80ºC and ship on dry ice. Serum and CSF can be refrigerated before shipping. Please see the supplemental link for specific specimen storage and preservation. |
| Transport Medium | Saliva and Nuchal (skin) biopsy should not be put in a transport medium |
| Specimen Labeling | Two patient identifiers on the specimen container and the test requisition, sample type and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship all specimens overnight, first AM delivery and provide the CDC Point of Contact with the tracking number of package.<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | IgG by IFA (Serum and CSF), IgM by IFA (Serum and CSF), Viral Neutralizing Antibodies by RFFIT (Serum and CSF), DFA (Nuchal (skin) biopsy), RT-PCR (Nuchal (skin) biopsy), RT-PCR (Saliva), Sequencing |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Saliva and CSF specimen should be free of blood because blood may interfere with test results due to the inhibitors present in blood |
| Additional Information | Sequencing will only be performed if the RT-PCR test is positive. Nuchal (skin) biopsy has to be a full punch (5-6 millimeters). If testing needs to be repeated results may take up to 7 days. |
| CDC Points of Contact | Rabie Duty Officer<br>(404) 639-1050 |

# Test Order

## Rabies Antibody - Pre/Post-exposure Prophylaxis

## CDC-10393

| | |
|---|---|
| Synonym(s) | Serology, Immunization status, Rabies titer |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/rabies/specific_groups/laboratories/index.html |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen can be kept refrigerated but prefer frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Two patient identifiers on the specimen container and the test requisition, sample type and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship all specimens overnight, first AM delivery and provide the CDC Point of Contact with the tracking number of package.<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Viral Neutralizing Antibodies RFFIT |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Hemolyzed samples interfere with test results |
| Additional Information | If testing needs to be repeated results may take up to 7 days |
| CDC Points of Contact | Rabies Duty Officer<br>(404) 639-1050 |

# Test Order

## Rabies Confirmatory Testing (Animal)

## CDC-10394

| | |
|---|---|
| Synonym(s) | Rabies DFA |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/rabies/specific_groups/laboratories/index.html |
| Performed on Specimens From | Animal |
| Acceptable Sample/ Specimen Type for Testing | Fresh-frozen brain tissues: full cross section of brain stem and cerebellum (vermis, right and left lateral lobes). Other specimens may be submitted upon consultation with Rabies Duty Officer. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Stored at -80$^0$C and should be kept on dry ice |
| Transport Medium | Not Applicable |
| Specimen Labeling | One patient identifier on the specimen container and the test requisition, sample type and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship all specimens overnight, first AM delivery and provide the CDC Point of Contact with the tracking number of package<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | DFA for rabies virus antigen, Direct Rapid Immunohistochemistry test (DRIT), RT-PCR, Virus Isolation, Antigenic Typing, Sequence Analysis |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Test is limited by decomposed tissues due to denaturation of viral proteins |
| Additional Information | May take up longer if repeat testing and additional procedures are required to rule-out rabies |
| CDC Points of Contact | Rabies Duty Officers<br>(404) 639-1050 |

# Test Order

## Rabies Confirmatory Testing (Human)

## CDC-10395

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/rabies/specific_groups/laboratories/index.html |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | All four of the following are required for antemortem testing: serum, CSF, Nuchal (skin) biopsy, and saliva. Fresh-frozen brain tissues for postmortem testing: full cross section of brain stem and cerebellum (vermis right and left lateral lobes). |
| Minimum Volume Required | 500 uL (serum, CSF, saliva) |
| Storage & Preservation of Specimen Prior to Shipping | Keep all samples stored at -80ºC and ship on dry ice. Serum and CSF can be refrigerated before shipping. Please see the supplemental link for specific specimen storage and preservation. |
| Transport Medium | Saliva and nuchal (skin) biopsy should not be put in a transport medium |
| Specimen Labeling | Two patient identifiers on the specimen container and the test requisition, sample type and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship all specimens overnight, first AM delivery and provide the CDC Point of Contact with the tracking number of package.<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | IgG by IFA (Serum and CSF), DFA (Nuchal (skin) biopsy and for rabies virus antigen), Antigenic Typing (brain), RT-PCR, Sequence Analysis, Isolation, Direct Rapid Immunohistochemistry test (DRIT), IHC, Viral Neutralizing Antibodies by RFFIT (Serum and CSF) |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Saliva and CSF specimen should be free of blood because blood may interfere with test results due to the inhibitors present in blood. Test is limited by decomposed tissues due to denaturation of viral proteins. |
| Additional Information | Sequencing will only be performed if the RT-PCR test is positive. Nuchal (skin) biopsy has to be a full punch (5-6 millimeters). If testing needs to be repeated results may take up to 7 days. |
| CDC Points of Contact | Rabies Duty Officer<br>(404) 639-1050 |

# Test Order

## Rabies Postmortem Human Testing

## CDC-10396

| | |
|---|---|
| Synonym(s) | Rabies DFA |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/rabies/specific_groups/laboratories/index.html |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Fresh-frozen brain tissues: full cross section of brain stem and cerebellum (vermis, right and left lateral lobes). Other specimens may be submitted upon consultation with Rabies Duty Officer. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Stored at -80$^0$C and should be kept on dry ice |
| Transport Medium | Not Applicable |
| Specimen Labeling | Two patient identifiers on the specimen container and the test requisition, sample type and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship all specimens overnight, first AM delivery and provide the CDC Point of Contact with the tracking number of package<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | DFA for rabies virus antigen, RT-PCR, Direct Rapid Immunohistochemistry test (DRIT), Virus Isolation, Sequence Analysis, Antigenic Typing |
| Turnaround Time | 2 Days |
| Interferences & Limitations | Tests are limited by decomposed tissues due to denaturation of viral proteins |
| Additional Information | If testing needs to be repeated results may take up to 7 days |
| CDC Points of Contact | Rabies Duty Officer<br>(404) 639-1050 |

# Test Order

## Rabies Virus Genetic Typing

## CDC-10397

| | |
|---|---|
| Synonym(s) | Rabies Antigenic Typing, Rabies Monoclonal Antibody Typing, Rabies MAB Typing, Rabies RT-PCR, Rabies Sequence Analysis, Rabies Variant Typing |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/rabies/specific_groups/laboratories/index.html |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Fresh-frozen brain tissues: full cross section of brain stem and cerebellum (vermis, right and left lateral lobes) preferred, or a viral isolate. Other specimens may be submitted upon consultation with Rabies Duty Officer. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Stored at -80ºC and should be kept on dry ice |
| Transport Medium | Not Applicable |
| Specimen Labeling | Two unique identifiers for human specimen and one unique identifier for animal specimen, date of collection and specimen type |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries and provide the CDC Point of Contact with the tracking number of package<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | RT-PCR, Sequence Analysis, Isolation |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Tests are limited by decomposed tissues due to denaturation of viral proteins |
| Additional Information | Non-urgent specimen may take longer than 7 days |
| CDC Points of Contact | Rabies Duty Officer<br>(404) 639-1050 |

# Test Order

## Rabies Virus Typing - CNS Tissues

## CDC-10398

| | |
|---|---|
| Synonym(s) | Rabies Antigenic typing |
| **Pre-Approval Needed** | **Rabies Duty Officer, , (404) 639-1050,** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/rabies/specific_groups/laboratories/index.html** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Fresh-frozen brain tissues: full cross section of brain stem and cerebellum (vermis, right and left lateral lobes). Other specimens may be submitted upon consultation with Rabies Duty Officer. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Stored at -80$^0$C and should be kept on dry ice |
| Transport Medium | Not Applicable |
| Specimen Labeling | Two unique identifiers for human specimen and one unique identifier for animal specimen, date of collection and specimen type |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries and provide the CDC Point of Contact with the tracking number of package<br><br>Frozen specimen should be shipped on dry ice |
| Methodology | DFA, IFA, Isolation, Sequencing Analysis |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Test is limited by decomposed tissues due to denaturation of viral proteins |
| Additional Information | Urgent specimens will be reported within 24 hours if the test does not need to be repeated. Non-urgent specimen may take longer than 7 days. |
| CDC Points of Contact | Rabies Duty Officer<br>(404) 639-1050 |

# Test Order

## Respiratory Agents (*Chlamydia*, *Legionella*, *Mycoplasma*) Molecular Detection

## CDC-10157

| | |
|---|---|
| Synonym(s) | Atypical pneumonia, CAP, *Chlamydia pneumoniae*, Legionnaires' disease or LD, Legionellosis, Pontiac fever, Walking pneumonia |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal (NP) and/or Oropharyngeal (OP) swabs, and any lower respiratory tract specimen including bronchoalveolar lavage (BAL) and sputum. Others upon consultation with laboratory. |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimens can be kept refrigerated if shipped in less than 72 hours of collection; otherwise specimen should be kept frozen. Store swabs in universal transport medium. |
| Transport Medium | Universal transport medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be sent on ice packs<br>Frozen specimen should be sent on dry ice |
| Methodology | Real Time PCR |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Do not use cotton swabs with wooden shafts. Specimen should be acquired prior to antibiotic treatment. Improper specimen storage and handling may result in inconclusive or inaccurate results. |
| Additional Information | None |
| CDC Points of Contact | Jonas Winchell<br>(404) 639-4921<br>Jwinchell@cdc.gov<br>Maureen Diaz<br>(404) 639-4534<br>mdiaz1@cdc.gov |

# Test Order

## Respiratory Virus (Not Influenza) Special Study

## CDC-10400

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## Respiratory Virus Molecular Detection (Not Influenza)

## CDC-10401

| | |
|---|---|
| Synonym(s) | Non-influenza Respiratory Virus |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Upper or lower respiratory tract specimens; pure culture isolate |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate all specimens promptly after collection. If specimens can be shipped to CDC within 72 hours of collection, they should be kept refrigerated at 4°C and shipped on gel ice-packs. Freezing should be avoided if possible, as this will reduce virus infectivity. Specimens for virus culture should not be frozen at -20° C. If specimens must be held for >72 hours, they should be promptly frozen at -70°C and shipped on dry ice. Liquid specimens should be aliquoted into properly labeled, leak-proof, unbreakable screw cap vials. Samples should be collected and processed in a manner that prevents cross-contamination between specimens, including changing gloves between specimens. |
| Transport Medium | Swabs may be shipped in commercial viral transport media |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. |
| Additional Information | None |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## *Rickettsia* Molecular Detection

## CDC-10402

| | |
|---|---|
| Synonym(s) | Rickettsiosis, Rocky Mountain Spotted Fever (RMSF), Spotted fever group *Rickettsia* (SFG), Typhus group *Rickettsia* (TG) |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:<br>-Symptom onset date<br>-Sample collection date<br>-Type of infection<br>-Status of illness<br>Recommended:<br>-Travel history<br>-Exposure history<br>-Therapeutic agents<br>-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Acute samples only, anticoagulated whole blood collected in Ethylenediaminetetraacetic acid (EDTA) treated tubes preferred; serum; fresh tissue biopsy |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Ethylenediaminetetraacetic acid (EDTA) blood tubes for blood; tissue in a sample collection tube |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Real Time Polymerase chain Reaction (PCR), Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Hemolysis in whole blood specimen will interfere with results. Multiple freeze thaw cycles and sample storage above refrigerated temperatures will interfere with proper nucleic acid extraction. If a specimen is drawn at convalescence it will reduce the chance of the target organism being present in blood. Avoid collection of blood specimen in heparin tubes. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Rickettsia* Serology Spotted Fever Group (RMSF) Serology

## CDC-10403

| | |
|---|---|
| Synonym(s) | Spotted fever group Rickettsiosis, Rocky Mountain Spotted Fever (RMSF) |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | IFA (Immunofluorescence Assay) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact lab prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Rickettsia* Serology Typhus Group Serology

## CDC-10404

| | |
|---|---|
| Synonym(s) | Typhus Group Rickettsiosis, Including epidemic Typhus and murine Typhus |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is required if the following information is not provided:**<br>**-Symptom onset date**<br>**-Sample collection date**<br>**-Type of infection**<br>**-Status of illness**<br>**Recommended:**<br>**-Travel history**<br>**-Exposure history**<br>**-Therapeutic agents**<br>**-Brief clinical history** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum<br>-acute (during active stage of illness)<br>-convalescent (2-4 weeks after acute stage) |
| Minimum Volume Required | 1.0 mL |
| Storage & Preservation of Specimen Prior to Shipping | Ideally keep specimen at a refrigerated temperature not frozen. If previously frozen, then keep specimen frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name and date of birth |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped refrigerated on cold packs. |
| Methodology | Indirect Fluorescence Assay (IFA) |
| Turnaround Time | 6 Weeks |
| Interferences & Limitations | Multiple freeze thaw cycles may interfere with antigen binding. Use sterile technique to avoid contamination of sample as this may compromise the sample and interfere with the ability to get accurate results. Acute and convalescent serum is needed for accurate diagnosis and if unable to collect both please contact laboratory prior to shipping. |
| Additional Information | The Rickettsial Zoonoses Branch Reference Diagnostic Laboratory aids State Laboratories in diagnosis of difficult samples/cases or if specialized tests are needed. Routine diagnostic samples should be sent to your State Laboratory or a commercial laboratory. |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## *Ricksettsia* Special Study

## CDC-10405

| | |
|---|---|
| Synonym(s) | Rickettsiosis, Rocky Mountain Spotted Fever (RMSF), Spotted fever group *Rickettsia* (SFG), Typhus group *Rickettsia* (TG) |
| **Pre-Approval Needed** | **Kato, Cecilia, (404) 639-1075, ckato@cdc.gov**<br>**Paddock, Christopher, (404) 639-1309, cdp9@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | Molecular detection, Serology, Culture, Immunohistochemistry (IHC), Other |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cecilia Kato<br>(404) 639-1075<br>ckato@cdc.gov<br>Christopher Paddock<br>(404) 639-1309<br>cdp9@cdc.gov |

# Test Order

## Rift Valley Fever (RVF) Identification

## CDC-10406

| | |
|---|---|
| Synonym(s) | RVF |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Rift Valley Fever (RVF) Serology

## CDC-10407

| | |
|---|---|
| Synonym(s) | RVF |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Rotavirus Antigen Detection

## CDC-10408

| | |
|---|---|
| Synonym(s) | Rotavirus Antigen EIA, Rotavirus Antigen ELISA |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Contact laboratory for supplemental forms** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | Human stool |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept either frozen at -20°C or colder or refrigerated at 4°C. Specimen tubes or cups must be packed inside of a leak proof secondary container. The secondary container needs to be packed inside an approved class B specimen shipping container (i.e. Fisher scientific cat# 22-130-431). |
| Transport Medium | Do not send specimen in bacterial or viral transport medium or a fixative |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Wednesday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs<br><br>Include a hardcopy list of specimens with your shipment. Please notify Mike Bowen (mkb6@cdc.gov) and Jamie Lewis (erw9@cdc.gov) when you are going to send specimens, and include the shipment tracking number if possible. |
| Methodology | Enzyme immunoassay (EIA) |
| Turnaround Time | 14 Days |
| Interferences & Limitations | None |
| Additional Information | Contact laboratory for instructions to recover a limited sample from diaper material |
| CDC Points of Contact | Mike Bowen<br>(404) 639-4922<br>mkb6@cdc.gov<br>Jamie Lewis<br>(404) 639-4054<br>erw9@cdc.gov |

# Test Order

## Rotavirus Genotyping

## CDC-10409

| | |
|---|---|
| Synonym(s) | Rotavirus typing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Contact laboratory for supplemental forms.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Human stool |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept either frozen at -20°C or colder or refrigerated at 4°C. Specimen tubes or cups must be packed inside of a leak proof secondary container. The secondary container needs to be packed inside an approved class B specimen shipping container (i.e. Fisher scientific cat# 22-130-431). |
| Transport Medium | Do not send specimen in bacterial or viral transport medium or a fixative |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Wednesday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs<br><br>Include a hardcopy list of specimens with your shipment. Please notify Mike Bowen (mkb6@cdc.gov) and Jamie Lewis (erw9@cdc.gov) when you are going to send specimens, and include the shipment tracking number if possible. |
| Methodology | RT-PCR, Sequencing |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | Contact laboratory for instructions to recover a limited sample from diaper material |
| CDC Points of Contact | Mike Bowen<br>(404) 639-4922<br>mkb6@cdc.gov<br>Jamie Lewis<br>(404) 639-4054<br>erw9@cdc.gov |

# Test Order

## Rotavirus Molecular Detection and Genotyping

## CDC-10410

| | |
|---|---|
| Synonym(s) | Rotavirus Real Time RT-PCR |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Contact laboratory for supplemental forms** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Human stool |
| Minimum Volume Required | 0.25 g or 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen should be kept either frozen at -20°C or colder or refrigerated at 4°C. Specimen tubes or cups must be packed inside of a leak proof secondary container. The secondary container needs to be packed inside an approved class B specimen shipping container (i.e. Fisher scientific cat# 22-130-431). |
| Transport Medium | Do not send specimen in bacterial or viral transport medium or a fixative |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Wednesday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs<br><br>Include a hardcopy list of specimens with your shipment. Please notify Mike Bowen (mkb6@cdc.gov) and Jamie Lewis (erw9@cdc.gov) when you are going to send specimens, and include the shipment tracking number if possible. |
| Methodology | Real Time RT-PCR, RT-PCR, Sequencing |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | Contact laboratory for instructions to recover a limited sample from diaper material |
| CDC Points of Contact | Mike Bowen<br>(404) 639-4922<br>mkb6@cdc.gov<br>Jamie Lewis<br>(404) 639-4054<br>erw9@cdc.gov |

# Test Order

## Rubella Detection and Genotyping

## CDC-10242

| | |
|---|---|
| Synonym(s) | German measles, three day measles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Throat swab in viral medium, nasopharyngeal aspirate or swab, Urine, cataracts, lens aspirate, oral fluid, cerebrospinal fluid (CSF), dry blood spots, and tissue samples |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | See: http://www.cdc.gov/rubella/lab/lab-specimens.html for collection and storage protocol |
| Transport Medium | Viral transport medium for swabs and appropriate culture medium. Make sure tubes are all in leak proof containers. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | The laboratory requests that the sender contacts the laboratory by email or phone before shipping<br><br>Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Template production by RT-PCR, Real time RT-PCR, Viral culture, Genotyping by Nucleic acid sequencing |
| Turnaround Time | 7 Days |
| Interferences & Limitations | See: http://www.cdc.gov/rubella/lab/index.html for information on the interferences and limitiations |
| Additional Information | Please include vaccination history, age, date of onset and sample collection.<br><br>For additional information please refer to:<br>http://www.cdc.gov/vaccines/pubs/surv-manual/index.html and<br>http://www.cdc.gov/measles/lab-tools/index.html |
| CDC Points of Contact | Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov<br>Emily Abernathy<br>(404) 639-1249<br>efa9@cdc.gov |

# Test Order

## Rubella Serology

## CDC-10246

| | |
|---|---|
| Synonym(s) | German measles, three day measles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and others upon consultation |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Refrigerated or frozen specimen should be shipped on cold packs<br>Laboratory will instruct on how to ship for other specimen types |
| Methodology | Commercial capture IgM, Commercial indirect IgG |
| Turnaround Time | 7 Days |
| Interferences & Limitations | IgM positive may not occur until 5 days post-rash onset |
| Additional Information | IgM and IgG assays are qualitative assays<br>For outbreaks or immuno-compromised patients please contact laboratory prior to shipment |
| CDC Points of Contact | Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov<br>Emily Abernathy<br>(404) 639-1249<br>efa9@cdc.gov |

# Test Order

## Rubella Serology (IgM and IgG) and Avidity

## CDC-10249

| | |
|---|---|
| Synonym(s) | German measles, three day measles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Serum should be kept refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Clearly label specimen type. |
| Shipping Instructions which Include Specimen Handling Requirements | The laboratory requests that the sender contacts the laboratory by email or phone before shipping<br><br>Ship specimen Monday -Thursday overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | CDC IgG avidity assay |
| Turnaround Time | 7 Days |
| Interferences & Limitations | Date of onset is necessary for accurate interpretation |
| Additional Information | Date of onset, vaccination status, age, date of collection and pregnancy status if applicable. |
| CDC Points of Contact | Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov<br>Emily Abernathy<br>(404) 639-1249<br>efa9@cdc.gov |

# Test Order

## Rubella Special Study

## CDC-10253

| | |
|---|---|
| Synonym(s) | German measles, three day measles |
| **Pre-Approval Needed** | **Icenogle, Joe, (404) 639-4557, jci1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Joe Icenogle<br>(404) 639-4557<br>jci1@cdc.gov<br>Emily Abernathy<br>(404) 639-1249<br>efa9@cdc.gov |

# Test Order

## *Salmonella* Identification and Serotyping

## CDC-10110

| | |
|---|---|
| Synonym(s) | *Salmonella* Typing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens; Please call for approval prior to sending, other specimen types. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Phenotypic identification, Phenotypic serotyping, Genetic identification, Genetic serotyping |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Matthew Mikoleit<br>(404) 639-2946<br>euh1@cdc.gov<br>Patricia (Patti) Jones<br>(404) 639-3334<br>pif1@cdc.gov |

# Test Order

## *Salmonella* serovar Typhi (only) serology

## CDC-10453

| | |
|---|---|
| Synonym(s) | Enteric Pathogen |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov**<br>**Gomez, Gerry, (404) 639-0537, goe4@cdc.gov** |
| **Supplemental Information Required** | **Date of illness onset, date of serum collection, clinical diagnosis. Indicate if patient is currently on antibiotics. Indicate if patient is suspect chronic carrier.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, paired serum preferred. Do not pool specimens. |
| Minimum Volume Required | 200 uL (More preferred) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain serum at 4°C (preferred); frozen specimens acceptable |
| Transport Medium | Separate serum from the clot and ship in a sterile labeled tube with the top tightly closed |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Gerry Gomez (goe4@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Various methods utilized; Consultation required |
| Turnaround Time | 3 Months |
| Interferences & Limitations | Plasma is not acceptable for typhoid testing |
| Additional Information | Paired serum specimens always preferred.<br><br>Please send one tube per specimen submission form. Submit multiple forms if needed. |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Gerry Gomez<br>(404) 639-0537<br>goe4@cdc.gov |

# Test Order

*Salmonella* Study

CDC-10109

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Mikoleit, Matthew, (404) 639-2946, euh1@cdc.gov**<br>**Jones, Patricia, (404) 639-3334, entericbacteria@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Matthew Mikoleit<br>(404) 639-2946<br>euh1@cdc.gov<br>Patricia Jones<br>(404) 639-3334<br>entericbacteria@cdc.gov<br><br>Michael Korth<br>(404) 639-2099<br>mqk8@cdc.gov |

# Test Order

## *Salmonella* Subtyping

## CDC-10108

| | |
|---|---|
| Synonym(s) | *Salmonella* Typing |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimen, but is required for all other types of specimen.**<br><br>**Indicate subtyping method(s) requested; provide PulseNet cluster code and PFGE pattern numbers if appropriate.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Not Applicable |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Serotyping, PFGE, MLVA, AST |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form. Epidemiologic metadata, PulseNet cluster code, and PFGE pattern designation requested if available.<br><br>Turn around time depends on the nature of subtyping performed; and, results are typically not reported directly back to the submitter, but deposited in surveillance databases. If the surveillance database is not accessible to submitters, results are posted on the PulseNet and OutbreakNet discussion board. Specific turn around time and a report are available upon request. |
| CDC Points of Contact | Matthew Mikoleit<br>(404) 639-2946<br>euh1@cdc.gov<br>Patricia Jones<br>(404) 639-3334<br>entericbacteria@cdc.gov<br><br>Michael Korth<br>(404) 639-2099<br>mqk8@cdc.gov |

# Test Order

## SARS Molecular Detection

## CDC-10412

| | |
|---|---|
| Synonym(s) | SARS coronavirus |
| **Pre-Approval Needed** | **Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Nasopharyngeal wash/aspirates, nasopharyngeal swabs, oropharyngeal swabs, broncheoalveolar lavage, tracheal aspirate, pleural fluid tap, sputum, and post-mortem tissue.<br>For more information go to http://www.cdc.gov/sars/guidance/F-lab/app4.html |
| Minimum Volume Required | 0.25 mL |
| Storage & Preservation of Specimen Prior to Shipping | Refrigerate or freeze tubes after specimens are placed in them. If specimens will be examined within 48 hours after collection, they can be refrigerated. If specimens must be held longer than 48 hours, freeze them as soon as possible after collection. Although storage in an ultra-low freezer (-70°C) is preferable, storage in a home-type freezer (if properly set at -20°C) is acceptable for short periods.<br>For more information go to http://www.cdc.gov/sars/guidance/F-lab/app4.html |
| Transport Medium | Swabs may be shipped in commercial viral transport media |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br>http://www.cdc.gov/sars/lab/specimen.html |
| Methodology | Polymerase Chain Reaction (PCR), Sequencing |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit some molecular assays. |
| Additional Information | http://www.cdc.gov/sars/about/index.html<br>http://www.cdc.gov/sars/guidance/F-lab/app5.html |
| CDC Points of Contact | Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov<br>Shifaq Kamili<br>(404) 639-2799<br>sgk5@cdc.gov |

# Test Order

## SARS Serology

## CDC-10413

| | |
|---|---|
| Synonym(s) | SARS-CoV, SARS-CoV EIA, SARS-CoV ELISA, SARS ELISA, SARS EIA |
| **Pre-Approval Needed** | **Haynes, Lia, (404) 639-4004, loh5@cdc.gov**<br>**Erdman, Dean, (404) 639-3727, dde1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum (acute and convalescent) and plasma<br>For more information go to http://www.cdc.gov/sars/guidance/F-lab/app4.html |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Collect whole blood in a serum separator tube. Allow the blood to clot, centrifuge briefly, and collect all the resulting sera in vials with external caps and internal O-ring seals. If there is no O-ring seal, then seal tightly with the available cap and secure with Parafilm. Collect whole blood in either EDTA tubes or in a clotting tube. For plasma, collect blood in EDTA tubes and place in vials with external caps and internal O-ring seals. Store plasma and serum at 4°C. Serum may be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Refrigerated specimen should be shipped on cold packs<br>Frozen specimen should be shipped on dry ice<br><br>http://www.cdc.gov/sars/lab/specimen.html |
| Methodology | ELISA |
| Turnaround Time | 3 Days |
| Interferences & Limitations | Do not collect in heparin tubes |
| Additional Information | None |
| CDC Points of Contact | Lia Haynes<br>(404) 639-4004<br>loh5@cdc.gov<br>Dean Erdman<br>(404) 639-3727<br>dde1@cdc.gov |

# Test Order

## Schistosomiasis Serology

## CDC-10466

| | |
|---|---|
| Synonym(s) | *Schistosoma mansoni*, *Schistosoma haematobium*, *Schistosoma japonicum*; Bilharzia, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Travel history REQUIRED, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum and Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | FAST-ELISA, Immunoblot, Western Blot, MAMA, HAMA, JAMA, Antibody Detection |
| Turnaround Time | 21 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Seoul Virus Serology

## CDC-10414

| | |
|---|---|
| Synonym(s) | Hanta, HFRS, HPS |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Shiga Toxin-producing *E. coli* Isolation from Enrichment Broth

## CDC-10105

| | |
|---|---|
| Synonym(s) | STEC, *E. coli* O157 |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Only Stx+ broths that produce growth on subculture should be submitted. Consult with EDLB contact before sending other specimens. Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Submit broths only positive by Shiga toxin-testing (Stx+) that produce growth of STEC on subculture. Consult with Dr. Nancy Strockbine before sending other specimen types or fecal specimens in enrichment broth that are Stx+ but no growth of STEC on subculture. |
| Minimum Volume Required | 5 mL (broth) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain specimen at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship with cold packs in compliance with federal and local guidelines. Shiga toxin-positive broths should be shipped as Category A Infectious Substances. |
| Methodology | Isolation, Phenotypic Identification Including Serotyping, PCR Testing for Virulence Markers |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Nancy Strockbine<br>(404) 639-4186<br>nas6@cdc.gov<br>Devon Stripling<br>(404) 639-2251<br>euo4@cdc.gov<br><br>Haley Martin<br>(404) 639-1612<br>hvw0@cdc.gov |

# Test Order

## Special Bacterial Pathogen Study

## CDC-10147

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **McQuiston, John, (404) 639-0270, zje8@cdc.gov**<br>**Whitney, Anne, (404) 639-1374, amw0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | John McQuiston<br>(404) 639-0270<br>zje8@cdc.gov<br>Anne Whitney<br>(404) 639-1374<br>amw0@cdc.gov |

# Test Order

## Staphylococcal Toxic Shock Syndrome Toxin (TSST-1)

## CDC-10426

| | |
|---|---|
| Synonym(s) | Staph Toxin, Toxic Shock Syndrome |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on suitable agar medium |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Isolate should be stored at room temperature |
| Transport Medium | Pure culture isolate on suitable agar medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries at room temperature as an etiologic agent. |
| Methodology | 16S sequencing, MALDI-TOF, Phenotypic Testing, SEA - SHE, PVL |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | SEA-SHE and PVL testing performed only with prior approval |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Kamile Rasheed<br>(404) 639-3247<br>jkr1@cdc.gov |

# Test Order

## *Staphylococcus* - *Micrococcus* Identification

## CDC-10226

| | |
|---|---|
| Synonym(s) | Staph, *Micrococcus*, Kocuria Identification |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on suitable agar medium |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Isolate should be stored at room temperature |
| Transport Medium | Pure culture isolate on suitable agar medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries at room temperature as an etiologic agent. |
| Methodology | 16S Sequencing, MALDI-TOF, Phenotypic Testing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | David Lonsway<br>(404) 639-2825<br>Dlonsway@cdc.gov<br>Valerie Albrecht<br>(404) 639-4552<br>gpy8@cdc.gov |

# Test Order

## Staphylococcus and MRSA Outbreak Strain Typing

## CDC-10230

| | |
|---|---|
| Synonym(s) | Staph Typing, MRSA Typing, Staphylococcal Typing |
| **Pre-Approval Needed** | **Rasheed, Kamile, (404) 639-3247, JRasheed@cdc.gov**<br>**Albrecht, Valerie, (404) 639-4552, gpy8@cdc.gov** |
| **Supplemental Information Required** | **Prior approval and Epidemiologic consultation required** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on suitable agar medium. Additional specimen types upon consultation with laboratory. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Isolate should be stored at room temperature |
| Transport Medium | Pure culture isolate on suitable agar medium or frozen in TSB plus glycerol |
| Specimen Labeling | Include date of isolation and unique specimen identifier |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday overnight to avoid weekend deliveries at room temperature as an etiologic agent. |
| Methodology | 16S Sequencing, MALDI-TOF, Phenotypic Testing, Molecular Strain Typing |
| Turnaround Time | 28 Days |
| Interferences & Limitations | None |
| Additional Information | Not CLIA compliant testing; for epidemiologic purposes only |
| CDC Points of Contact | Kamile Rasheed<br>(404) 639-3247<br>JRasheed@cdc.gov<br>Valerie Albrecht<br>(404) 639-4552<br>gpy8@cdc.gov |

# Test Order

## *Staphylococcus aureus* Detection - Foodborne Outbreak

## CDC-10113

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, dft1@cdc.gov**<br>**Gomez, Gerardo, (404) 639-0537, goe4@cdc.gov** |
| **Supplemental Information Required** | **Only specimens from foodborne outbreaks accepted. Consult with EDLB contact before sending specimens. Provide any preliminary results if available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates, vomitus, stool, food. Only specimens from foodborne outbreaks accepted. Consult with Dr. Talkington before sending specimens. |
| Minimum Volume Required | 25 g (food), 10 g (vomitus, stool) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain food, vomitus and stool at 4°C |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Gerardo Gomez (goe4@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Toxin Detection in Food, Culture, PCR |
| Turnaround Time | 2 Months |
| Interferences & Limitations | None |
| Additional Information | Direct toxin detection requires food samples |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>dft1@cdc.gov<br>Gerardo Gomez<br>(404) 639-0537<br>goe4@cdc.gov |

# Test Order

## STD Bacterial Molecular Diagnostic Evaluation

## CDC-10178

| | |
|---|---|
| Synonym(s) | Sexually Transmitted Disease |
| **Pre-Approval Needed** | **Trees, David, (404) 639-2134, dlt1@cdc.gov**<br>**Johnson, Steve, (404) 639-2879, sbj1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Gonococcal bacterial culture |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store culture at -70°C in TSA with 20% glycerol medium |
| Transport Medium | TSA with 20% glycerol |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Specimen should be shipped on dry ice, as an etiologic agent. |
| Methodology | Molecular cloning, PCR, Whole genome sequencing |
| Turnaround Time | 12 Weeks |
| Interferences & Limitations | None |
| Additional Information | Please provide information on any antibiotics the patient may have been treated with |
| CDC Points of Contact | David Trees<br>(404) 639-2134<br>dlt1@cdc.gov<br>Steve Johnson<br>(404) 639-2879<br>sbj1@cdc.gov |

# Test Order

## STD International QA – *N. gonorrhoeae*, *C. trachomatis*, *M. genitalium*, *T. vaginalis*

## CDC-10175

| | |
|---|---|
| Synonym(s) | Sexually Transmitted Disease |
| **Pre-Approval Needed** | **Cheng, Cheng, (404) 639-3154, cyc1@cdc.gov**<br>**Chi, Kai, (404) 639-0694, krc2@cdc.gov** |
| **Supplemental Information Required** | **Determined upon consultation** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Urine, oral pharynx swabs, cervical swabs, vaginal swabs, and rectal swabs collected on any commercially available product, and other specimen types upon consultation with laboratory |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Swabs must be kept frozen |
| Transport Medium | Should be transported on commercial Nucleic Acid Amplification Test (NAAT) medium |
| Specimen Labeling | Please include country of origin, de-linked identifier and date of collection |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Specimen should be shipped on dry ice, as an etiologic agent. |
| Methodology | PCR |
| Turnaround Time | 12 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Cheng Chen<br>(404) 639-3154<br>cyc1@cdc.gov<br>Kai Chi<br>(404) 639-0694<br>krc2@cdc.gov |

# Test Order

## Strep ABCs Surveillance Study

## CDC-10218

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **McGee, Lesley, (404) 639-0455, afi4@cdc.gov**<br>**Beall, Bernard, (404) 639-1237, bbeall@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/abcs/downloads/ABCs-case-rpt-form.pdf |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Sterile site Isolates of GAS, GBS and *S.pneumoniae* that meet the ABCs inclusion criteria |
| Minimum Volume Required | Not applicable |
| Storage & Preservation of Specimen Prior to Shipping | For isolates, store on blood or chocolate agar, in transport media or as a frozen glycerol stock; additional details and directions will be provided upon consultation. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Based on consultation |
| Additional Information | None |
| CDC Points of Contact | Lesley McGee<br>(404) 639-0455<br>afi4@cdc.gov<br>Bernard Beall<br>(404) 639-1237<br>bbeall@cdc.gov |

# Test Order

## *Streptococcus* (Beta Hemolytic Strep) Typing

## CDC-10216

| | |
|---|---|
| Synonym(s) | GAS typing, GBS typing, other beta hemolytic strep, Group A Strep, Group B Strep |
| **Pre-Approval Needed** | **Beall, Bernard, (404) 639-1237, bbeall@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/streplab/other-streptococci-qa.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates and clinical/environmental specimens and others as approved upon consultation |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | For isolates, store on blood or chocolate agar, in transport media or as a frozen glycerol stock; additional details and directions will be provided upon consultation. |
| Transport Medium | Dependent on specimen type to be determined upon consultation |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Based on consultation |
| Additional Information | Please complete questionnaire on website |
| CDC Points of Contact | Bernard Beall<br>(404) 639-1237<br>bbeall@cdc.gov<br>Patricia Shewmaker<br>(404) 639-4826<br>paw3@cdc.gov |

# Test Order

## *Streptococcus* (Catalase negative, Gram Positive Coccus) Identification

## CDC-10213

| | |
|---|---|
| Synonym(s) | Streptococci, enterococci, viridans streptococci |
| **Pre-Approval Needed** | **Beall, Bernard, (404) 639-1237, bbeall@cdc.gov**<br>**Shewmaker, Patricia, (404) 639-4826, paw3@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/streplab/other-streptococci-qa.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates and clinical/environmental specimens and others as approved upon consultation |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | For isolates, store on blood or chocolate agar, in transport media or as a frozen glycerol stock; additional details and directions will be provided upon consultation. |
| Transport Medium | Dependent on specimen type to be determined upon consultation |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | Based on consultation |
| Additional Information | Please complete questionnaire on website |
| CDC Points of Contact | Bernard Beall<br>(404) 639-1237<br>bbeall@cdc.gov<br>Patricia Shewmaker<br>(404) 639-4826<br>paw3@cdc.gov |

# Test Order

## Streptococcus (Catalase negative, Gram Positive Coccus) Identification and AST

## CDC-10214

| | |
|---|---|
| Synonym(s) | Streptococci, enterococci, viridans streptococci |
| **Pre-Approval Needed** | **Beall, Bernard, (404) 639-1237, BBEALL@cdc.gov**<br>**Shewmaker, Patricia, (404) 639-4826, paw3@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Pure culture isolate on a suitable agar slant medium; Prior consultation required for other sample/specimen types |
| Minimum Volume Required | Not applicable |
| Storage & Preservation of Specimen Prior to Shipping | Keep refrigerated if cannot ship immediately |
| Transport Medium | Suitable agar slant medium (example: blood or chocolate); Frozen glycerol stock is also acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs<br>At room temperature for any etiologic agents |
| Methodology | Phenotypic Testing, Molecular Testing, Broth microdilution MIC |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Preliminary susceptibility results may be available within 28 days or less.<br>If susceptibility has been performed, indicate the method and results.<br>Date of specimen collection and original submitter. |
| CDC Points of Contact | Bernard Beall<br>(404) 639-1237<br>BBEALL@cdc.gov<br>Patricia Shewmaker<br>(404) 639-2825<br>paw3@cdc.gov<br><br>David Lonsway<br>(404) 639- 2825<br>dul7@cdc.gov |

# Test Order

*Streptococcus pneumoniae* Typing

CDC-10215

| | |
|---|---|
| Synonym(s) | Pneumococcus Serotyping |
| **Pre-Approval Needed** | **Beall, Bernard, (404) 639-1237, bbeall@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/streplab/other-streptococci-qa.html |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates and clinical/environmental specimens and others as approved upon consultation |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | For isolates, store on blood or chocolate agar, in transport media or as a frozen glycerol stock; additional details and directions will be provided upon consultation. |
| Transport Medium | Dependent on specimen type to be determined upon consultation |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday -Thursday, overnight to avoid weekend deliveries<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on cold packs |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Based on consultation |
| Additional Information | Please complete questionnaire on website |
| CDC Points of Contact | Bernard Beall<br>(404) 639-1237<br>bbeall@cdc.gov<br>Lesley McGee<br>(404) 639-0455<br>afi4@cdc.gov |

# Test Order

## Streptococcus Study

## CDC-10217

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Beall, Bernard, (404) 639-1237, bbeall@cdc.gov**<br>**McGee, Lesley, (404) 639-0455, afi4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates and clinical/environmental specimens and others as approved upon consultation |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | For isolates blood or chocolate agar; transport media or frozen glycerol stock; additional details and directions will be provided upon consultation. |
| Transport Medium | To be determined |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition.<br><br>Note: surveillance studies may label specimens according to protocol |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | Phenotypic Testing, Molecular Testing |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Bernard Beall<br>(404) 639-1237<br>bbeall@cdc.gov<br>Lesley McGee<br>(404) 639-0455<br>afi4@cdc.gov |

# Test Order

## Strongyloidiasis Enzyme Immunoassay

## CDC-10467

| | |
|---|---|
| Synonym(s) | Strongyloidiasis, *Strongyloides stercoralis,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | EIA, ELISA, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Syphilis Serology

## CDC-10173

| | |
|---|---|
| Synonym(s) | Treponemal and non-treponemal |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Need to supply date of birth** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum (preferred), CSF, and/or plasma (possible to preform test but not preferred) |
| Minimum Volume Required | 1 mL (for serum or plasma) |
| Storage & Preservation of Specimen Prior to Shipping | Serum and Plasma can be stored at 4°C unless for more than 4-5 days it should be frozen. CSF should be stored frozen at -70°C. |
| Transport Medium | None |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice and refrigerated specimen should be shipped on cold packs, as an etiologic agent. |
| Methodology | RPR, TPPA, TrepSURE, CSF-VDRL |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Avoid freeze-thaw cycles as this can affect test results |
| Additional Information | None |
| CDC Points of Contact | Yetunde Fakile<br>(404) 639-3784<br>yfakile@cdc.gov<br>Susan Kikkert<br>(404) 639-2871<br>sjk4@cdc.gov |

# Test Order

## Tick Borne Encephalitis (TBE) Identification

## CDC-10415

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Frozen tissue, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be placed in plastic screw capped vials, frozen to -70°C, and kept frozen until shipment. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped frozen on dry ice. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | Molecular Typing, Polymerase Chain Reaction (PCR) |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity. Heparin may cause interference with the molecular tests and should be avoided. |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Tick Borne Encephalitis (TBE) Serology

## CDC-10416

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Stroeher, Ute, (404) 639-4704, ixy8@cdc.gov**<br>**Knust, Barbara, (404) 639-1104, bkk0@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | **http://www.cdc.gov/ncezid/dhcpp/vspb/pdf/specimen-submission.pdf** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | CSF, blood and serum |
| Minimum Volume Required | 1 mL |
| Storage & Preservation of Specimen Prior to Shipping | Specimen must be kept cold (at or below 4°C). If possible place specimen in plastic screw capped vials. See link to supplemental submission form for specific information on various specimen types. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Patient name, patient ID #, specimen type, date collected |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday overnight to avoid weekend deliveries. Specimen should be shipped on cold packs or dry ice if frozen. See supplemental submission forms for further details. Do not ship specimen without prior consultation and approval. |
| Methodology | ELISA |
| Turnaround Time | 10 Days |
| Interferences & Limitations | Specimen must remain frozen; warming or freeze thawing reduces sensitivity |
| Additional Information | Critical specimens will take less than 4 days to turn around. See link to supplemental submission forms for detailed information. |
| CDC Points of Contact | Ute Stroeher<br>(404) 639-4704<br>ixy8@cdc.gov<br>Barbara Knust<br>(404) 639-1104<br>bkk0@cdc.gov |

# Test Order

## Toxocariasis Enzyme Immunoassay

## CDC-10468

| | |
|---|---|
| Synonym(s) | Larva migrans, Toxocariasis, *Toxocara canis*, *Toxocara cati,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors; clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma, or vitreous fluid |
| Minimum Volume Required | 0.5 |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | EIA, ELISA, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 718-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## Toxoplasmosis Special Study

## CDC-10492

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **McAuliffe, Isabell, (404) 718-4101, ibm4@cdc.gov**<br>**Qvarnstrom, Yvonne, (404) 718-4123, bvp2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | None |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Isabell McAuliffe<br>(404) 718-4101<br>ibm4@cdc.gov<br>Yvonne Qvarnstrom<br>(404) 718-4123<br>bvp2@cdc.gov |

# Test Order

## *Treponema pallidum* Molecular Detection

## CDC-10176

| | |
|---|---|
| Synonym(s) | Syphilis |
| **Pre-Approval Needed** | **Pillay, Allan, (404) 639-2140, apillay@cdc.gov**<br>**Chi, Kai, (404) 639-0694, krc2@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Swab of an ulcer or skin lesion, blood collected in an EDTA tube, body fluids, frozen tissue and/or Formalin-Fixed, Paraffin-Embedded (FFPE) tissue |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be frozen unless FFPE tissue which can be stored at room temperature |
| Transport Medium | Should be transported on commercial Nucleic Acid Amplification Test (NAAT) medium |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice, refrigerated specimen should be shipped on cold packs and FFPE can be shipped at room temperature, as an etiologic agent. |
| Methodology | PCR |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Allan Pillay<br>(404) 639-2140<br>apillay@cdc.gov<br>Kai Chi<br>(404) 639-0694<br>krc2@cdc.gov |

# Test Order

## *Treponema pallidum* Molecular Typing

## CDC-10177

| | |
|---|---|
| Synonym(s) | *Treponema pallidum* Genotyping, *Treponema pallidum* Strain Typing, Syphilis Typing |
| **Pre-Approval Needed** | **Pillay, Allan, (404) 639-2140, apillay@cdc.gov**<br>**Chen, Cheng, (404) 639-3154, cyc1@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Swab of an ulcer or skin lesion, blood collected in an EDTA tube, body fluids, frozen tissue and/or Formalin-Fixed, Paraffin-Embedded (FFPE) tissue |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Specimens should be frozen except for FFPE tissue, which can be stored at room temperature |
| Transport Medium | Should be transported on commercial Nucleic Acid Amplification Test (NAAT) medium |
| Specimen Labeling | Test subject to CLIA regulations require two patient identifiers on the specimen container and the test requisition. Also, include date collected. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday - Thursday, overnight to avoid weekend deliveries. Frozen specimen should be shipped on dry ice, refrigerated specimen should be shipped on cold packs and FFPE can be shipped at room temperature, as an etiologic agent. |
| Methodology | PCR, Sequencing, RFLP |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Allan Pillay<br>(404) 639-2140<br>apillay@cdc.gov<br>Cheng Chen<br>(404) 639-3154<br>cyc1@cdc.gov |

# Test Order

## Trichinellosis Enzyme Immunoassay

## CDC-10470

| | |
|---|---|
| Synonym(s) | Trichinosis, *Trichinella spiralis,* parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Exposure and travel history, include other relevant risk factors (consumption of raw or undercooked pork or game meat); clinical symptoms, treatment and relevant lab results.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or Plasma |
| Minimum Volume Required | 0.5 mL |
| Storage & Preservation of Specimen Prior to Shipping | No specific requirements |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday – Thursday, overnight to avoid weekend deliveries. Ship specimen at room temperature, not on dry ice, as an etiologic agent. |
| Methodology | EIA, ELISA, Antibody Detection |
| Turnaround Time | 18 Days |
| Interferences & Limitations | Substances known to interfere with immunoassays include: bilirubin, lipids, and hemoglobin |
| Additional Information | None |
| CDC Points of Contact | Isabel McAuliffe<br>(404) 719-4100<br>ibm4@cdc.gov<br>DPDx<br>(404) 718-4120<br>dpdx@cdc.gov |

# Test Order

## *Trichomonas* Susceptibility

## CDC-10239

| | |
|---|---|
| Synonym(s) | *Trichomonas*, trich, parasite |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Supplemental form not needed** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Vaginal swabs or scrapings. Must be a live culture. |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Do not freeze specimen. If the specimen cannot be examined immediately, it should be preserved in polyvinyl alcohol (PVA) and stained after smears in order to be examined later. |
| Transport Medium | InPouch TV (Commercial product) or Diamond's TYM |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | The isolate should be sent to CDC by overnight courier (not USPS) on the same day it is obtained from the patient.<br><br>Insure the InPouch is properly closed and place it in the mailing container that they arrived in and mail by OVERNIGHT delivery service (recommended: Federal Express or AirBorne Express) to:<br><br>Pete Augostini<br>CDC/Parasitic Disease Branch<br>1600 Clifton Rd. NE, MS D65<br>Bldg. 23, 10th Floor, Rm. 108<br>Atlanta, GA 30329-4081<br><br>NOTE:<br>a) Delivery to the reference laboratory within 24 hours is essential to ensure organism survival.<br>B) The laboratory can only accept sample delivery Monday through Friday. Please plan to ship your samples Monday, Tuesday, Wednesday, or Thursday in order for the laboratory to receive the overnight delivery the next day.<br>C) While we provide the testing as a no-cost service, we do not have the funds to pay for shipment of the organism. Therefore, please do not mark "recipient" as the party responsible for payment of shipment costs. If this occurs, we will refer the shipping company back to you for payment of costs.<br>Please include the metronidazole treatment history and request forms with your sample. |
| Methodology | Antimicrobial susceptibility |
| Turnaround Time | 4 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Evan Secor<br>(404) 718-4141 |

# Test Order

*Trichomonas* Susceptibility

CDC-10239

was4@cdc.gov

# Test Order

## *Trypanosoma cruzi* Molecular Detection

## CDC-10493

| | |
|---|---|
| Synonym(s) | Chagas, American Trypanosomiasis, parasite, triatomine, kissing bug |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include detailed information where the insect was found (kitchen, bed, porch, etc.).** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Animal |
| Acceptable Sample/ Specimen Type for Testing | Triatomine insect |
| Minimum Volume Required | N/A |
| Storage & Preservation of Specimen Prior to Shipping | Dry or in 70% ethanol |
| Transport Medium | None or in 70% ethanol |
| Specimen Labeling | One submitter identifier or SPHL ID on the specimen container and date of collection. |
| Shipping Instructions which Include Specimen Handling Requirements | Place insect in a crush-proof container with paper towel cushioning for dry specimens or in 70% ethanol with no cushioning. Ship at ambient temperature in compliance with local and Federal guidelines. Send by regular mail or overnight Monday-Thursday to avoid weekend deliveries. |
| Methodology | Conventional PCR |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Gena Lawrence<br>(404) 718-4315<br>geg7@cdc.gov<br>Alice Sutcliffe<br>(404) 718-4326<br>gok0@cdc.gov |

# Test Order

## Varicella Zoster Virus (VZV) Avidity

## CDC-10256

| | |
|---|---|
| Synonym(s) | Chicken pox, shingles |
| **Pre-Approval Needed** | **Schmid, Scott, (404) 639-0066, dss1@cdc.gov**<br>**Radford, Kay, (404) 639-2192, (404) 639-2192** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/shingles/downloads/specimen_collection_form.pdf |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum or plasma |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday - Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG avidity |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>(404) 639-2192 |

# Test Order

## Varicella Zoster Virus (VZV) Detection

## CDC-10254

| | |
|---|---|
| Synonym(s) | Chicken pox, shingles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/shingles/downloads/specimen_collection_form.pdf |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Skin lesions, scab, saliva, cerebrospinal fluid (CSF), urine, and whole blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Frozen or refrigerated for saliva, cerebrospinal fluid (CSF), urine or whole blood. Room temperature, dry skin lesions and scabs. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight. Cold packs or dry ice for liquid specimen. Ambient temperature for scabs and lesions. Ship as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR) |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## Varicella Zoster Virus (VZV) Genotyping

## CDC-10257

| | |
|---|---|
| Synonym(s) | Chicken pox, shingles |
| **Pre-Approval Needed** | **Schmid, Scott, (404) 639-0066, dss1@cdc.gov**<br>**Folster, Jennifer, (404) 639-3668, apz5@cdc.gov** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/shingles/downloads/specimen_collection_form.pdf |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Skin lesions, scab, saliva, cerebrospinal fluid (CSF), urine, and whole blood |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Frozen or refrigerated for saliva, cerebrospinal fluid (CSF), urine or whole blood. Room temperature, dry skin lesions and scabs. Blood should be collected in EDTA or citrate tubes. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship specimen Monday-Thursday, overnight. Cold packs or dry ice for liquid specimen. Ambient temperature for scabs and lesions. Ship as an etiologic agent. |
| Methodology | Polymerase Chain Reaction (PCR), DNA sequencing |
| Turnaround Time | 1 Week |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Jennifer Folster<br>(404) 639-3668<br>apz5@cdc.gov |

# Test Order

## Varicella Zoster Virus (VZV) Serology

## CDC-10255

| | |
|---|---|
| Synonym(s) | Chicken pox, shingles |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **See Supplemental Form** |
| **Supplemental Form** | http://www.cdc.gov/shingles/downloads/specimen_collection_form.pdf |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Serum, plasma or cerebrospinal fluid (CSF) |
| Minimum Volume Required | 200 uL |
| Storage & Preservation of Specimen Prior to Shipping | Keep specimen either refrigerated or frozen |
| Transport Medium | None |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship overnight Monday - Thursday, with cold packs or dry ice as an etiologic agent. |
| Methodology | IgG antibody detected by EIA, IgM antibody detected by EIA |
| Turnaround Time | 7 Days |
| Interferences & Limitations | None |
| Additional Information | None |
| CDC Points of Contact | Scott Schmid<br>(404) 639-0066<br>dss1@cdc.gov<br>Kay Radford<br>(404) 639-2192<br>kjr7@cdc.gov |

# Test Order

## *Vibrio cholerae* Identification

## CDC-10119

| | |
|---|---|
| Synonym(s) | Cholera |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens; Please call for approval prior to sending, other specimen types.**<br><br>**Provide any preliminary results available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Every suspect *Vibrio cholerae* isolate should be sent to EDLB as soon as possible. Ship at ambient temperature in compliance with Federal and local guidelines. |
| Methodology | Phenotypic Characterization (Serogrouping for O1, O139, O75, and O141), PCR for Virulence Markers (Toxin and tcpA biotype) |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Every suspect *Vibrio cholerae* isolate should be sent to EDLB as soon as possible |
| CDC Points of Contact | Cheryl Bopp<br>(404) 639-1798<br>cab4@cdc.gov<br>Michele Parsons<br>(404) 639-1965<br>zcp9@cdc.gov |

# Test Order

*Vibrio cholerae* serology

CDC-10454

| | |
|---|---|
| Synonym(s) | Enteric Pathogen |
| **Pre-Approval Needed** | **Talkington, Deborah, (404) 639-3918, Dft1@cdc.gov**<br>**Pruckler, Jim, (404) 639-3816, jmp3@cdc.gov** |
| **Supplemental Information Required** | **Date of illness onset, date of serum collection, clinical diagnosis. Indicate if patient is currently on antibiotics.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human |
| Acceptable Sample/ Specimen Type for Testing | Paired serum is preferred. Serum is always preferred but plasma is acceptable. Do not pool specimens. |
| Minimum Volume Required | 100 uL (more preferred) |
| Storage & Preservation of Specimen Prior to Shipping | Maintain serum at 4°C (preferred); frozen specimens acceptable |
| Transport Medium | Separate serum from the clot and ship in a sterile labeled tube with the top tightly closed. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. Please notify Deborah Talkington (dft1@cdc.gov) and Jim Pruckler (jmp3@cdc.gov) once specimens have been shipped to provide the tracking number.<br><br>Ship with cold packs in compliance with federal and local guidelines |
| Methodology | Various methods utilized; Consultation required |
| Turnaround Time | 3 Months |
| Interferences & Limitations | None |
| Additional Information | Paired serum specimens always preferred.<br><br>Please send one tube per specimen submission form. Submit multiple forms if needed. |
| CDC Points of Contact | Deborah Talkington<br>(404) 639-3918<br>Dft1@cdc.gov<br>Jim Pruckler<br>(404) 639-3816<br>jmp3@cdc.gov |

# Test Order

*Vibrio* Subtyping

CDC-10122

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens, but is required for all other specimen types.**<br><br>**Specify type of subtyping requested in 'Previous Laboratory Results' on back of form.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Not Applicable |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | PFGE, MLST, MLVA, AST |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turn around time depends on the nature of subtyping performed; and, results are typically not reported directly back to the submitter, but deposited in surveillance databases. If the surveillance database is not accessible to submitters, results are posted on the PulseNet and OutbreakNet discussion board. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Maryann Turnsek<br>(404) 639-5178<br>hud4@cdc.gov |

# Test Order

## *Vibrio*, *Aeromonas*, and Related Organisms Identification

## CDC-10120

| | |
|---|---|
| Synonym(s) | *Grimontia* species, *Photobacterium* species, *Salinivibrio* species |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens, but is required for all other specimen types.**<br><br>**Provide any preliminary results that are available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Phenotypic Identification, Genetic Identification |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Maryann Turnsek<br>(404) 639-5178<br>hud4@cdc.gov |

# Test Order

## *Vibrio*, *Aeromonas*, and Related Organisms Study

## CDC-10121

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Tarr, Cheryl, (404) 639-2011, crt6@cdc.gov**<br>**Turnsek, Maryann, (404) 639-5178, hud4@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Maryann Turnsek<br>(404) 639-5178<br>hud4@cdc.gov |

# Test Order

## *Yersinia* (non-*Y. pestis*) and Other *Enterobacteriaceae* Identification

## CDC-10123

| | |
|---|---|
| Synonym(s) | *Arsenophonus*, *Biostraticola*, *Brenneria*, *Buchnera*, *Budvicia*, *Buttiauxella*, *Calymmatobacterium*, *Cedecea*, *Citrobacter*, *Cosenzaea*, *Cronobacter*, *Dickeya*, *Edwardsiella*, *Enterobacter*, *Erwinia*, *Ewingella*, *Gibbsiella*, *Hafnia*, *Klebsiella*, *Kluyvera*, *Leclercia*, *Leminorella*, *Levinea*, *Lonsdalea*, *Mangrovibacter*, *Moellerella*, *Morganella*, *Obesumbacterium*, *Pantoea*, *Pectobacterium*, *Phaseolibacter*, *Photorhabdus*, *Plesiomonas*, *Pragia*, *Proteus*, *Providencia*, *Rahnella*, *Raoultella*, *Saccharobacter*, *Samsonia*, *Serratia*, *Shimwellia*, *Sodalis*, *Tatumella*, *Thorsellia*, *Trabulsiella*, *Wigglesworthia*, *Xenorhabdus*, *Yersinia*, *Yokenella* |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens, but is required for all other specimen types.**<br><br>**Provide any preliminary results that are available.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Test subject to CLIA regulations and requires two patient identifiers on the specimen container and the test requisition. |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Phenotypic Identification, Genetic Identification |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Turnaround times for routine isolates may be extended during major foodborne outbreak activities or due to limited availability of resources. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Lori Gladney<br>(404) 639-1219<br>hze1@cdc.gov |

# Test Order

## *Yersinia* (non-*Y. pestis*) Subtyping

## CDC-10124

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Prior approval is not required for human specimens, but is required for all other specimen types.**<br><br>**Indicate subtyping method(s) requested on specimen submission form** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Isolates |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | No Specific Requirements |
| Transport Medium | Ship cultures on nonselective nutrient or similar agar (TSA, HIA, etc.) in tubes with leak-proof screw cap closures. Agar plates are not acceptable. |
| Specimen Labeling | Not Applicable |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries<br><br>Ship at ambient temperature in compliance with Federal and local guidelines |
| Methodology | Serotyping, PFGE, MLST |
| Turnaround Time | 8 Weeks |
| Interferences & Limitations | None |
| Additional Information | Specify type of subtyping requested in 'Previous Laboratory Results' on back of form.<br><br>Turn around time depends on the nature of subtyping performed; and, results are typically not reported directly back to the submitter, but deposited in surveillance databases. If the surveillance database is not accessible to submitters, results are posted on the PulseNet and OutbreakNet discussion board. |
| CDC Points of Contact | Cheryl Tarr<br>(404) 639-2011<br>crt6@cdc.gov<br>Lori Gladney<br>(404) 639-1219<br>hze1@cdc.gov |

# Test Order

## *Yersinia pestis* Culture and Identification

## CDC-10418

| | |
|---|---|
| Synonym(s) | Plague |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human, Animal, and Food/Environmental/Medical Devices/Biologics |
| Acceptable Sample/ Specimen Type for Testing | Human: lymph node aspirate, sputum, bronchial/tracheal wash, pleural fluid, blood, ulcer swab, biopsy/autopsy specimens (sections of lymph node, lung, liver, spleen); Animal: necropsy specimen (lymph node, lung, liver or spleen); Environmental: fleas |
| Minimum Volume Required | Not Applicable |
| Storage & Preservation of Specimen Prior to Shipping | Store specimens containing suspected live bacteria at 2°-8°C to maintain viability. If processing is delayed, tissue samples can be directly frozen at -70°C. Store samples for culture of live bacteria without preservatives (formaldehyde, alcohol), at 2°-8°C (not frozen). Anticoagulants such as heparin, citrate and EDTA are acceptable because they do not inhibit the viability of bacteria. |
| Transport Medium | Respiratory specimens, lymph node aspirates, blood, tissue/biopsy/autopsy/necropsy specimens should all be transported at 4°C. Swabs must be in a Cary-Blair or Amies medium, not frozen. If tissue biopsy/autopsy/necropsy transport is delayed, tissue samples can be directly frozen at -70°C. |
| Specimen Labeling | Specimen identifier and patient name |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Culture, Direct Fluorescent Antibody (DFA), Bacteriophage Lysis |
| Turnaround Time | 3 Weeks |
| Interferences & Limitations | Samples for testing by culture should be taken prior to antibiotic treatment |
| Additional Information | None |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

## *Yersinia pestis* Serology

## CDC-10419

| | |
|---|---|
| Synonym(s) | Plague |
| **Pre-Approval Needed** | **None** |
| **Supplemental Information Required** | **Please include submitting agency, contact name, address, phone number, specimen identifier, patient name, specimen source and type, sex and date of birth, symptoms of onset, sample collection date, and clinical information including type and date of treatment patient has received.** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | Serum |
| Minimum Volume Required | 500 uL |
| Storage & Preservation of Specimen Prior to Shipping | Sera may be stored at 2°-8°C for up to 14 days. If testing is delayed for a longer period, serum samples may be frozen. |
| Transport Medium | Not Applicable |
| Specimen Labeling | Specimen identifier and patient name |
| Shipping Instructions which Include Specimen Handling Requirements | Ship Monday-Thursday, overnight to avoid weekend deliveries. All packages must be addressed to:<br><br>Centers for Disease Control and Prevention<br>Bacterial Diseases Branch<br>Attn: John Young<br>3156 Rampart Road<br>Fort Collins, CO 80521<br><br>Frozen specimen should be shipped on dry ice<br>Refrigerated specimen should be shipped on ice packs |
| Methodology | Passive Hemagglutination, Passive Hemagglutination Inhibition |
| Turnaround Time | 2 Weeks |
| Interferences & Limitations | Hemolyzed samples may interfere with test results |
| Additional Information | None |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |

# Test Order

*Yersinia pestis* Special Study

CDC-10420

| | |
|---|---|
| Synonym(s) | None |
| **Pre-Approval Needed** | **Schriefer, Marty, (970) 221-6479, mms7@cdc.gov**<br>**Petersen, Jeannine, (970) 266-3524, nzp0@cdc.gov** |
| **Supplemental Information Required** | **None** |
| **Supplemental Form** | **None** |
| Performed on Specimens From | Human and Animal |
| Acceptable Sample/ Specimen Type for Testing | To be determined |
| Minimum Volume Required | To be determined |
| Storage & Preservation of Specimen Prior to Shipping | To be determined |
| Transport Medium | To be determined |
| Specimen Labeling | To be determined |
| Shipping Instructions which Include Specimen Handling Requirements | To be determined |
| Methodology | |
| Turnaround Time | |
| Interferences & Limitations | To be determined |
| Additional Information | To be determined |
| CDC Points of Contact | Marty Schriefer<br>(970) 221-6479<br>mms7@cdc.gov<br>Jeannine Petersen<br>(970) 266-3524<br>nzp0@cdc.gov |