New York City Public Health Laboratory Tests and Services Manual

Updated 12/6/2024

Submission of specimens/samples for testing requires the receipt of a specimen/sample that is **appropriate in type and condition for the test requested**. The accuracy of test result and the timeliness of reporting of results are dependent on these two factors.

Clinical Specimens:
All specimens should be labeled at the time of collection with at least two patient identifiers. The specimen identifiers must be clearly legible and unambiguous and include **at minimum:**

1. Patient's first and last name **AND** at least one of the following:
    - Date of birth
    - Medical record number
    - Referring laboratory accession number

Each specimen label should be securely affixed label. The patient's name and second identifier must appear exactly as it does on the test requisition (e.g., Doe, Jane)

Environmental samples:
Environmental samples should be labeled at the time of collection. Sample identifiers must be clearly legible and unambiguous and include **at minimum:**

1. Sample identification number **AND** one of the following:
    - Name of facility/site of collection
    - Case number
    - Complaint number
    - Other appropriate identifier

Specimens/Samples that are not in compliance with the above will be rejected and the test cancelled.

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A

Suspected Agent	Carbapenem Resistant Organism (CRO)
Test Name	Antibiotic Resistance Testing
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Molecular and culture-based tests
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	2-5 business days
Related Tests	- Antimicrobial Susceptibility Testing

Suspected Agent	Antimicrobial susceptibility testing
Test Name	Antimicrobial Susceptibility Testing
Approval Required	PHL Microbiology Section Phone: 212-671-5849
Methodology	E-test gradient minimum inhibitory concentration
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	2-5 business days
Related Tests	- Carbapenem Resistant Organism (CRO)

C

Suspected Agent	*Campylobacter* spp.
Test Name	*Campylobacter* spp. Isolate Identification
Approval Required	N/A
Methodology	Conventional biochemicals
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on Campy BA media
Storage/Transport Conditions	Room temperature
Turnaround Time	2-4 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel

Suspected Agent	*Candida auris (C. auris)*
Test Name	*Candida auris* Detection by Real-time PCR
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Real-Time PCR
Acceptable Specimen(s)	Eswab in 1 mL of modified Amies medium
Specimen Collection/ Preparation	Collected from Nares, Axilla, and/or Groin
Storage/Transport Conditions	• All swabs should be transported or shipped at room temperature in a timely manner following collection. • Specimens can be stored at 20–25°C for up to 5 days, at 4°C for up to 7 days and at -20°C for up to 6 months.
Turnaround Time	4 - 5 business days
Related Tests	N/A

Suspected Agent	*Clostridium botulinum* toxin
Test Name	*Clostridium botulinum* Toxin Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Mouse bioassay
Acceptable Specimen(s)	Serum (Adult: 5–15 ml; Pediatric: 4 ml); Stool (Adult: 10-20 g; Pediatric: 10 g)
Specimen Collection/ Preparation	**Collect/Preparation:** **Serum or Whole blood** in Serum Separator Tube (SST) or red-top tube without additive or anticoagulant. Blood and serum must be collected before antitoxin treatment. After collection, allow blood to clot completely at room temperature. Separate serum from cells by centrifugation and draw off serum into a sterile container. **Stool** collected in a leak-proof, sterile container. Do not add specimen to container with preservative/transport medium. ***NOTE:*** *Smaller quantities of stool (0.5–1.0 g) may be tested. If needed, enema can be obtained with sterile non-bacteriostatic water (not tap water).*
Storage/Transport Conditions	Store and transport with cold packs at 2–8°C.
Turnaround Time	4-5 business days
Related Tests	N/A

Suspected Agent	*Chlamydia trachomatis/Neisseria gonorrhoeae*
Test Name	CT/NG NAAT
Approval Required	PHL STI Molecular Unit Phone: 212-671-5919 or 212-671-5890
Methodology	Nucleic acid amplification
Acceptable Specimen(s)	Urine (neat), urine in transport tubes, swabs (endocervical, urethral, rectal, -oropharyngeal) Note: • Specimens collected from adolescents less than 14 years of age have not been evaluated for this assay. • The test is not intended for the evaluation of suspected sexual abuse or for other medico-legal indications."
Specimen Collection/ Preparation	Specimens must be submitted in manufacturer's approved collection devices.
Storage/Transport Conditions	Store and transport specimens at 2-30°C. Neat urine must be received within 18 hours of collection; Urine in transport tubes and swabs in swab transport medium must be received within 7 calendar days
Turnaround Time	3 business days
Related Tests	Neisseria gonorrhoeae culture and AST

E

Suspected Agent	Enteric isolate
Test Name	General Bacteriology isolate
Approval Required	N/A
Methodology	Conventional biochemicals and serotyping, MALDI-TOF
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

G

Suspected Agent	Gastrointestinal Pathogen Panel *Campylobacter* (*jejuni*, *coli*, and *upsaliensis*) *Clostridium difficile* (toxin A/B) *Plesiomonas shigelloides* *Salmonella* *Yersinia enterocolitica* *Vibrio* (*parahaemolyticus*, *vulnificus*, and *cholerae*) Enteroaggregative *Escherichia coli* (EAEC) Enteropathogenic *Escherichia coli* (EPEC) Enterotoxigenic *Escherichia coli* (ETEC) lt/st Shiga-like toxin-producing *Escherichia coli* (STEC) stx1/stx2 *Escherichia coli* O157 *Shigella*/Enteroinvasive *Escherichia coli* (EIEC) *Cryptosporidium* *Cyclospora cayetanensis* *Entamoeba histolytica* *Giardia lamblia* Adenovirus F40/41 Astrovirus Norovirus GI/GII Rotavirus A Sapovirus (I, II, IV, and V)
Test Name	Gastrointestinal Pathogen PCR Panel
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Qualitative multiplex real-time PCR
Acceptable Specimen(s)	Stool in Cary-Blair Transport Medium (≥ 1 ml)
Specimen Collection/ Preparation	**Collect:** Fresh stool in Cary-Blair Transport Medium. **Prepare:** Collect fresh stool specimen and place specimen in transport medium within 2 hours of collection. Add stool until level indicated on transport media container. Do not over fill.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection.
Turnaround Time	1-3 business days
Related Tests	- Stool Culture - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - *Campylobacter* spp. Isolate Identification - Norovirus Group I/II Real-Time RT-PCR - *Salmonella enterica* ser. Typhi/Paratyphi Rule Out - *Vibrio* spp. Isolate Identification - *Yersinia* spp. Isolate Identification - Shiga Toxin-Producing *Escherichia coli* Rule Out - *Shigella* spp. Serotyping and Antimicrobial Susceptibility Testing

Suspected Agent	General bacteriology culture
Test Name	General Bacteriology Culture
Approval Required	Approved for NYC Office of Chief Medical Examiner only
Methodology	Conventional microbiological methods, MALDI-TOF
Acceptable Specimen(s)	Primary specimens
Specimen Collection/ Preparation	Collect in a sterile container
Storage/Transport Conditions	Room temperature
Turnaround Time	3-14 business days
Related Tests	N/A

Suspected Agent	General bacteriology isolate (including enteric isolates)
Test Name	General Bacteriology Isolate
Approval Required	N/A
Methodology	Conventional microbiological methods, MALDI-TOF
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	2-14 business days
Related Tests	N/A

H

Suspected Agent	*Haemophilus influenzae*
Test Name	*Haemophilus influenzae* Serotyping
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Conventional microbiological methods, MALDI-TOF
Acceptable Specimen(s)	Isolate from sterile site
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	1-3 business days
Related Tests	N/A

Suspected Agent	Human Immunodeficiency Virus (HIV)
Test Name	HIV Ag/Ab Combo Assay
Approval Required	PHL Serology Unit Phone: 212-671-5826
Methodology	Qualitative Chemiluminescent Immunoassay
Acceptable Specimen(s)	Plasma (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect**: Plasma Preparation Tube (PPT) only **Prepare**: Separate plasma from cells by centrifugation. Blood can be collected in PPT and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours. If plasma is separated, freeze the separated plasma at -20°C or below and ship with dry ice.
Turnaround Time	1-4 business days
Related Tests	- HIV-1 Quantitative NAAT - HIV-1 Genotype and Drug Resistance

Suspected Agent	Human Immunodeficiency Virus (HIV)
Test Name	HIV-1 Quantitative NAAT (HIV-1 pNAAT and HIV-1 RNA Viral Load)
Approval Required	PHL STI Molecular Unit Phone: 212-671-5919 or 212-671-5890
Methodology	Quantitative transcription-mediated amplification
Acceptable Specimen(s)	Plasma (≥ 2 ml)
Specimen Collection/ Preparation	**Collect:** Plasma Preparation Tube (PPT). Alternatively, lavender (EDTA) and pink (K2EDTA) tubes are accepted. **Prepare:** Separate plasma from cells within 6 hours of collection by centrifugation. For lavender- and pink-top tubes, transfer plasma to a labeled screw-cap tube within 24 hours of collection.
Storage/Transport Conditions	Store refrigerated and ship in with cold packs. Specimens must be received next business day following collection. Alternatively, freeze separated plasma at -70°C and ship with dry ice.
Turnaround Time	3-5 business days
Related Tests	- HIV Ag/Ab Combo Assay - HIV-1 Genotype/ Drug Resistance Panel

Suspected Agent	Human Immunodeficiency Virus (HIV)
Test Name	HIV-1 Genotype/ Drug Resistance Panel
Approval Required	PHL STI Molecular Unit Phone: 212-671-5919 or 212-671-5890
Methodology	Next Generation Sequencing
Acceptable Specimen(s)	Plasma (≥ 4 ml). Test will be canceled if viral load is below 1,000 copies/ml.
Specimen Collection/ Preparation	**Collect:** Two vials of plasma collected in Plasma Preparation Tubes (PPT). Alternatively, lavender (EDTA) and pink (K2EDTA) tubes are accepted. **Prepare:** Tubes must be centrifuged within 2 hours of collection. For lavender- and pink-top tubes, transfer plasma to a labeled screw-cap tube within 24 hours of collection.
Storage/Transport Conditions	Store and ship refrigerated with cold packs. Specimens must be received the next business day following collection. Alternatively, freeze separated plasma at -70°C and ship with dry ice.
Turnaround Time	5-16 business days
Related Tests	- HIV Ag/Ab Combo Assay - HIV-1 Quantitative NAAT

Suspected Agent	Influenza A and B viruses
Test Name	Influenza A and B Virus Real-Time with Subtyping RT-PCR
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Qualitative real-time RT-PCR
Acceptable Specimen(s)	Nasopharyngeal swab, nasal swab, throat swab or dual nasopharyngeal/ throat swab in viral transport medium (3 ml); nasal aspirate (≥ 3 ml)
Specimen Collection/ Preparation	N/A
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. If specimens are shipped after 72 hours from collection, freeze at -70°C and ship with dry ice. NOTE: Specimens received older than 72 hours (refrigerated) or older than 30 days (frozen) will be rejected.
Turnaround Time	3-5 business days
Related Tests	- CDC SARS-CoV-2/Influenza A and B Real-Time RT-PCR - Xpert Xpress SARS-CoV-2/flu/RSV

L

Suspected Agent	*Legionella*
Test Name	*Legionella Culture*
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Conventional microbiological methods, MALDI-TOF, direct fluorescent antibody test, real-time PCR
Acceptable Specimen(s)	Primary specimens
Specimen Collection/ Preparation	Collect in a sterile container
Storage/Transport Conditions	Room temperature
Turnaround Time	1-7 business days
Related Tests	- *Legionella* Isolate Serotyping (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	Legionella
Test Name	*Legionella Isolate Serotyping*
Approval Required	N/A
Methodology	Direct fluorescent antibody, Real-time PCR
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	1-7 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Listeria monocytogenes*
Test Name	*Listeria monocytogenes* Isolate Serotyping
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Conventional microbiological methods, MALDI-TOF
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	1-3 business days
Related Tests	- *Listeria monocytogenes* Detection in Food - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental)

M

Suspected Agent	Measles virus
Test Name	Measles (Rubeola) Virus, IgG Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative chemiluminescent immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST; red-speckled or gold top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Measles (Rubeola) Virus, IgM Antibodies - Measles Virus Real-Time RT-PCR

Suspected Agent	Measles virus
Test Name	Measles (Rubeola) Virus, IgM Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative enzyme-linked immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST; red-speckled or gold top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Measles (Rubeola) Virus, IgG Antibodies - Measles Virus Real-Time RT-PCR

Suspected Agent	Measles virus
Test Name	Measles Virus Real-Time RT-PCR
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative real-time RT-PCR
Acceptable Specimen(s)	Nasopharyngeal swab or throat swab in viral transport medium (3 ml)
Specimen Collection/ Preparation	N/A
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. If specimens are to be shipped after 72 hours from collection freeze at -70°C and ship with dry ice. NOTE: Specimens received older than 72 hours (refrigerated) or older than 30 days (frozen) will be rejected.
Turnaround Time	1-3 business days
Related Tests	- Measles (Rubeola) Virus, IgG Antibodies - Measles (Rubeola) Virus, IgM Antibodies

Suspected Agent	Monkeypox virus (MPXV)
Test Name	Mpox Assay
Approval Required	For Bureau of Public Health Clinics - Approval through clinic site. For all others, Bureau of Communicable Diseases. Phone: 347-396-2600 For inquiries regarding MPXV clade I testing, call the NYC Health Department Provider Access Line at: 866-692-3641
Methodology	Qualitative real-time PCR
Acceptable Specimen(s)	Swab in VTM/ UTM
Specimen Collection/ Preparation	Collect only one swab from each lesion collected. Transfer swab in its own separate sterile VTM/UTM container. After consultation with the PAL additional specimen may need to be submitted for MPXV clade differentiation.
Storage/Transport Conditions	Within one hour of collection, place specimens in a refrigerator (2–8°C). Refrigerated specimens should be sent to PHL within 5 days of collection. Refrigerated specimens must be sent with cold packs
Turnaround Time	1-3 business days
Related Tests	Smallpox Ruleout Panel

Suspected Agent	MRSA/VISA
Test Name	MRSA/VISA Isolate Confirmation
Approval Required	N/A
Methodology	E-test gradient minimum inhibitory concentration
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	1-3 business days
Related Tests	- Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	Mumps virus
Test Name	Mumps Virus, IgG Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative chemiluminescent immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST, red-speckled or gold-top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red-top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Mumps Virus, IgM Antibodies - Mumps Virus Real-Time RT-PCR

Suspected Agent	Mumps virus
Test Name	Mumps Virus, IgM Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative enzyme-linked immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST, red-speckled or gold-top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red-top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tube refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Mumps Virus, IgG Antibodies - Mumps Virus Real-Time RT-PCR

Suspected Agent	Mumps virus
Test Name	Mumps Virus Real-Time RT-PCR
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative real-time RT-PCR
Acceptable Specimen(s)	Buccal/oral swab or oropharyngeal swab in viral transport medium (3 ml)
Specimen Collection/ Preparation	Use a flexible-shaft buccal or oropharyngeal swab and place in 3 ml of viral transport medium.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. If specimens are shipped after 72 hours from collection, freeze at -70°C and ship with dry ice.
Turnaround Time	3-5 business days
Related Tests	- Mumps Virus, IgG Antibodies - Mumps Virus, IgM Antibodies

Suspected Agent	Mycobacteria (AFB)
Test Name	*Mycobacteria (AFB) Culture and Smear*
Approval Required	Bureau of TB Control only
Methodology	Fluorescent acid-fast bacilli smear; mycobacterial culture identification by MALDI-TOF or HPLC
Acceptable Specimen(s)	Sputum or other lower respiratory (e.g., BAL, bronchial/tracheal aspirates) or body fluids (≥ 3 ml); CSF or gastric aspirates (≥ 3 ml); tissue or lymph node (>1 g). urine (≥ 5 ml)
Specimen Collection/ Preparation	Collect in a sterile container. Patient is to rinse mouth with boiled/sterile/bottled or distilled water prior to sputum collection. Gastric aspirates must be neutralized (pH 7.0) with sodium carbonate within 1 hour of collection
Storage/Transport Conditions	Sputum or other lower respiratory (e.g., BAL, bronchial/tracheal aspirates) or body fluids: 2-8°C CSF or gastric aspirates: room temperature Tissue or lymph node: 2-8°C Urine: 2-8°C
Turnaround Time	AFB smear: 1 business day Mycobacterial culture: 70 days
Related Tests	- Mycobacteria Culture and Smear with Reflex to NAAT - *Mycobacterium tuberculosis* Culture Identification and Antimicrobial Susceptibility Testing with Reflex to Genotyping

Suspected Agent	Mycobacteria (AFB)
Test Name	*Mycobacteria Culture and Smear with Reflex to NAAT*
Approval Required	Bureau of TB Control only
Methodology	Fluorescent acid-fast bacilli smear; mycobacterial culture identification by MALDI-TOF, HPLC, or NAAT NOTE: NAAT (Gene Xpert MTB/RIF) will only be performed on first time sputum specimens that are AFB smear positive
Acceptable Specimen(s)	Processed sputum preferred (≥ 1.5 ml); raw sputum or other lower respiratory (e.g. BAL, bronchial/tracheal aspirates) or body fluids (≥ 3 ml); CSF or gastric aspirates (≥ 3 ml); tissue or lymph node (>1 g); urine (≥ 5 ml)
Specimen Collection/ Preparation	Collect in a sterile container. Patient is to rinse mouth with boiled/sterile/bottled or distilled water prior to sputum collection.
Storage/Transport Conditions	Sputum or other lower respiratory (e.g. BAL, bronchial/tracheal aspirates) or body fluids: 2-8°C CSF or gastric aspirates: room temperature Tissue or lymph node: 2-8°C Urine: 2-8°C
Turnaround Time	AFB smear: 1 business day NAAT: 1-4 business days Mycobacterial culture: 70 days
Related Tests	- Mycobacteria (AFB) Culture and Smear - *Mycobacterium tuberculosis* Culture Identification and Antimicrobial Susceptibility Testing with Reflex to Genotyping

Suspected Agent	*Mycobacterium tuberculosis*
Test Name	*Mycobacterium tuberculosis* Culture Identification and Antimicrobial Susceptibility Testing with Reflex to Genotyping
Approval Required	N/A
Methodology	Identification methods include MALDI-TOF or HPLC. First-line antimicrobial susceptibility testing by MGIT 960 broth method performed on the **first MTBC culture-positive isolate received from a new patient.** Isolates resistant to any first-line drug (except PZA mono-resistance) are reflexed to second-line drug susceptibility testing by agar proportion method.
Acceptable Specimen(s)	*M. tuberculosis* complex isolate on appropriate media *Note: Patient should have known history of tuberculosis*
Specimen Collection/ Preparation	Primary pure MTBC isolate on solid slanted medium: -Volume: ample, visible growth on LJ, 7H10, etc. (a lawn of visible pure growth)) Primary pure isolate in liquid medium: -Volume: ≥ 3 ml of MGIT, 7H9 broth, etc.
Storage/Transport Conditions	N/A
Turnaround Time	MGIT 960 broth: 30 business days Agar proportion: 45 business days
Related Tests	- Mycobacteria (AFB) Culture and Smear - Mycobacteria Culture and Smear with Reflex to NAAT

N

Suspected Agent	*Neisseria gonorrhoeae*
Test Name	*Neisseria gonorrhoeae* culture and AST
Approval Required	Bureau of Hepatitis, HIV and STIs Phone: 347-396-7201
Methodology	Conventional microbiological methods, MALDI-TOF, antimicrobial susceptibility testing for positive culture
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on In-Tray media preferred. Transport isolates using a N. gonorrhoeae specific transport system such as JEMBEC or InTray. Alternatively, isolates for ID confirmation and susceptibility testing can be transported as a fresh 24-hour-old sub-culture on a chocolate slant shipped at ambient temperature scheduled to reach the PHL laboratory within 24 hours.
Storage/Transport Conditions	Room temperature
Turnaround Time	3-5 business days
Related Tests	- CT/NG NAAT

Suspected Agent	*Neisseria meningitidis*
Test Name	*Neisseria meningitidis* Serotyping
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Conventional microbiological methods, MALDI-TOF, molecular methods and antimicrobial susceptibility testing
Acceptable Specimen(s)	Isolate on appropriate media at room temperature, CSF in sterile container at 2-8°C
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	24-72 hours
Related Tests	- Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	Norovirus
Test Name	Norovirus Group I/II Real-Time RT-PCR
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Qualitative multiplex real-time RT-PCR
Acceptable Specimen(s)	Stool (≥ 0.5 ml; 0.5 g)
Specimen Collection/ Preparation	Transfer stool to a leak-proof, sterile container. Do not add specimen to container with preservative/transport medium.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. If specimens are shipped after 72 hours from collection, freeze at -70°C and ship with dry ice. NOTE: Specimens received older than 72 hours (refrigerated) will be rejected.
Turnaround Time	3-5 business days
Related Tests	- Gastrointestinal Pathogen PCR Panel

R

Suspected Agent	Rabies virus
Test Name	*Rabies Virus Direct Fluorescent Antibody Test (animal specimens)*
Approval Required	Veterinary Public Health Service Phone: 212-676-2120
Methodology	Direct fluorescent antibody test
Acceptable Specimen(s)	Refrigerated head of suspected animal only. Bats (killed) may be submitted as whole carcass.
Specimen Collection/ Preparation	All animals for rabies diagnosis should be reported first to Veterinary Public Health Service 212-676-2120 between 9am–5pm weekdays and to Poison Control 212-POISONS after normal working hours.
Storage/Transport Conditions	Store and ship at 2-8°C with cold packs as soon as possible
Turnaround Time	24 hours (Emergency Turn-around-time: 6 hours after received by the Rabies Laboratory)
Related Tests	- Rabies Virus Clinical Ante-Mortem Diagnosis of Human Rabies

Suspected Agent	Rabies virus
Test Name	*Rabies Virus Clinical Ante-Mortem Diagnosis of Human Rabies*
Approval Required	N/A
Methodology	Send out (NYS Wadsworth)
Acceptable Specimen(s)	See: http://www.wadsworth.org/rabies/prof/ante.htm
Specimen Collection/ Preparation	See: http://www.wadsworth.org/rabies/prof/ante.htm
Storage/Transport Conditions	See: http://www.wadsworth.org/rabies/prof/ante.htm
Turnaround Time	1-4 weeks
Related Tests	- Rabies Virus Direct Fluorescent Antibody Test (animal specimens)

Suspected Agent	Respiratory Pathogen Panel Adenovirus Coronavirus 229E Coronavirus HKU1 Coronavirus NL63 Coronavirus OC43 Influenza A Influenza A/H3 Influenza A/2009-H1 Influenza B Human Metapneumovirus Human Rhinovirus/Enterovirus Parainfluenza 1 (PIV1) Parainfluenza 2 (PIV2) Parainfluenza 3 (PIV3) Parainfluenza 4 (PIV4) Respiratory Syncytial Virus *Bordetella parapertussis* *Bordetella pertussis* *Chlamydophila/Chlamydia pneumoniae* *Mycoplasma pneumoniae*
Test Name	Respiratory PCR Panel (includes SARS-CoV-2)
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Qualitative multiplex real-time PCR
Acceptable Specimen(s)	Nasopharyngeal swab in viral transport medium (3 ml)
Specimen Collection/ Preparation	**Collect**: Use a flocked, flexible-shaft nasopharyngeal swab and place in 3 ml of viral transport medium.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. Relatedly, freeze at -70°C and ship with dry ice. NOTE: Specimens received older than 72 hours (refrigerated) or older than 30 days (frozen) will be rejected.
Turnaround Time	1-3 business days
Related Tests	- Influenza A and B Virus Real-Time RT-PCR with Subtyping - Xpert Xpress SARS-CoV-2/flu/RSV - *Bordetella pertussis* Culture

Suspected Agent	Rubella virus
Test Name	Rubella Virus, IgG Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative chemiluminescent immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST; red-speckled or gold top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Rubella Virus, IgM Antibodies

Suspected Agent	Rubella virus
Test Name	Rubella Virus, IgM Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative chemiluminescent immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST; red-speckled or gold top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Rubella Virus, IgG Antibodies

S

Suspected Agent	*Salmonella enterica* ser. Typhi/Paratyphi
Test Name	*Confirm Salmonella typhi/parathyphi*
Approval Required	Department of Health and Mental Hygiene only
Methodology	Identification by conventional biochemicals and serotyping by serology
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel

Suspected Agent	SARS-CoV-2 Influenza A Influenza B RSV
Test Name	Xpert Xpress SARS-CoV-2/flu/RSV
Approval Required	PHL: 212-671-5890
Methodology	Qualitative multiplex real-time RT-PCR
Acceptable Specimen(s)	Nasopharyngeal swab in viral/universal transport medium (3 ml)
Specimen Collection/ Preparation	Use a flocked, flexible-shaft nasopharyngeal swab and place in 3 ml of viral transport medium.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. Relatedly, freeze at -70°C and ship with dry ice
Turnaround Time	1-3 business days
Related Tests	- Influenza A and B Virus Real-Time RT-PCR with Subtyping - SARS-CoV-2 Subtyping by Whole Genome Sequencing (WGS)

Suspected Agent	SARS-CoV-2
Test Name	SARS-CoV-2 Subtyping by Whole Genome Sequencing (WGS)
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	ARTIC PCR tiling of SARS-CoV-2 cDNA and Illumina/Nanopore sequencing
Acceptable Specimen(s)	Nasopharyngeal swab in viral transport medium (3 ml)
Specimen Collection/ Preparation	Use a flocked, flexible-shaft nasopharyngeal swab and place in 3 ml of viral transport medium.
Storage/Transport Conditions	Store and ship refrigerated (with cold packs) within 72 hours from collection. Relatedly, freeze at -70°C and ship with dry ice
Turnaround Time	3-8 business days
Related Tests	- Xpert Xpress SARS-CoV-2/flu/RSV

Suspected Agent	Shiga toxin-producing *Escherichia coli*
Test Name	Shiga Toxin-Producing *Escherichia coli* Rule Out
Approval Required	N/A
Methodology	Culture; enzyme immunoassay for Shiga toxin I & II. If positive, identification and serotyping
Acceptable Specimen(s)	Stool or GN broth
Specimen Collection/ Preparation	Primary stool in Para-Pack or any Cairy Blair transport media for stool culture
Storage/Transport Conditions	Send on cold pack
Turnaround Time	2-4 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - STEC (non-O157:H7) Detection in Food (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Clinical

Suspected Agent	*Shigella* spp.
Test Name	*Shigella* spp. Serotyping and Antimicrobial Susceptibility Testing
Approval Required	N/A
Methodology	Conventional biochemical serotyping and antimicrobial susceptibility testing
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Suspected Agent	Stool culture
Test Name	Stool Culture
Approval Required	Bureau of Communicable Diseases/Office of Environmental Investigations only
Methodology	Conventional biochemicals and serotyping
Acceptable Specimen(s)	Stool
Specimen Collection/ Preparation	Collect in a sterile container
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- Gastrointestinal Pathogen PCR Panel

V

Suspected Agent	Varicella zoster virus
Test Name	Varicella Zoster Virus (VZV), IgG Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative chemiluminescent immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST, red-speckled or gold-top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red-top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 72 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Varicella Zoster Virus (VZV), IgM Antibodies

Suspected Agent	Varicella zoster virus
Test Name	Varicella Zoster Virus (VZV), IgM Antibodies
Approval Required	Bureau of Immunization Phone: 347-396-2402
Methodology	Qualitative enzyme-linked immunoassay
Acceptable Specimen(s)	Serum (≥ 1 ml); blood (≥ 4 ml)
Specimen Collection/ Preparation	**Collect:** Blood in red-top tube or serum in Serum Separator Tube (SST, red-speckled or gold-top tube). **Prepare:** After collection, allow specimen to clot completely at room temperature. Separate serum from cells by centrifugation. Blood can be collected in red-top tube and submitted to PHL for processing.
Storage/Transport Conditions	Store and ship non-centrifuged tubes refrigerated with cold packs within 48 hours. Relatedly, if the serum is separated, freeze the separated serum at -20°C or below and ship with dry ice.
Turnaround Time	1-3 business days
Related Tests	- Varicella Zoster Virus (VZV), IgG Antibodies

Suspected Agent	*Vibrio* spp.
Test Name	*Vibrio* spp. Isolate Identification
Approval Required	N/A
Methodology	Conventional biochemicals and serotyping
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- Vibriobacter spp. Detection in Food (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Y

Suspected Agent	*Yersinia* spp.
Test Name	*Yersinia* spp. Isolate Identification
Approval Required	N/A
Methodology	Conventional biochemicals, MALDI-TOF
Acceptable Specimen(s)	Isolate
Specimen Collection/ Preparation	Streak on appropriate media
Storage/Transport Conditions	Room temperature
Turnaround Time	3-10 business days
Related Tests	- *Yersinia enterocolitica* Detection in Food (environmental) - *Yersinia pestis* Identification (biothreat) - Gastrointestinal Pathogen PCR Panel (clinical)

Environmental

A

Suspected Agent	Aerobes
Test Name	Aerobic Plate Count in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Dilution plating with molten standard plate count agar. Enumerations following incubation 48 hours later.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	2 business days
Related Tests	N/A

Suspected Agent	Alkalinity
Test Name	Alkalinity (SM23 2320B)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Titration method per SM2320B
Acceptable Specimen(s)	Potable Water (≥ 250 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	14 calendar days
Related Tests	N/A

B

Suspected Agent	*Bacillus cereus*
Test Name	*Bacillus cereus* Detection and Enumeration in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Dilution plating on selective media followed by enumeration of potential colonies, biochemical testing, and microscopy.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	4-6 business days
Related Tests	N/A

C

Suspected Agent	Calcium
Test Name	Ca, Total (SM 23 3111B)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Flame atomic absorption spectrometry per SM 3111B
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	- Calcium Hardness (SM 2340B)

Suspected Agent	Calcium Hardness
Test Name	Calcium Hardness (SM 2340B)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Calculation method per SM 2340B
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	- Ca, Total (SM 23 3111B)

Suspected Agent	*Campylobacter*
Test Name	*Campylobacter jejuni* detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in a microaerophilic environment, PCR pre-screening of enrichments, followed by biochemical testing, latex agglutination, and microscopy.
Acceptable Specimen(s)	Any Food (≥11g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	5-7 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Suspected Agent	Chloride
Test Name	Chloride (EPA 300.0,R.2.1)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Ion chromatography EPA300.0
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	N/A

Suspected Agent	*Clostridium perfringens*
Test Name	*Clostridium perfringens* Detection and Enumeration in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Dilution plating and culture under anaerobic conditions. Followed by enumeration of potential colonies, biochemical testing, and microscopy.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	3-5 business days
Related Tests	N/A

Suspected Agent	Coliforms
Test Name	Total and Fecal Coliforms in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Dilutions in select liquid medium tubes with Durham vials. Incubation is followed by scoring growth reactions using a published standard table for most probable number estimations.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	2-4 business days
Related Tests	- Total Coliforms, SM23 9223B (Colilert) - Fecal Coliforms, Colilert-18 - Coliform Enumeration in Pools, Colilert-18

Suspected Agent	Coliforms
Test Name	*Total Coliforms, SM23 9223B (Colilert)*
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	SM23 9223B (Colilert)
Acceptable Specimen(s)	Potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 30 hours for potable water samples.
Turnaround Time	2 business days
Related Tests	- Total and Fecal Coliforms in Food - Fecal Coliforms, Colilert-18 - Coliform Enumeration in Pools, Colilert-18

Suspected Agent	Coliforms
Test Name	*Fecal Coliforms, Colilert-18*
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Colilert-18
Acceptable Specimen(s)	Non-potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 8 hours for non-potable water samples.
Turnaround Time	2 business days
Related Tests	- Total and Fecal Coliforms in Food - Total Coliforms, SM23 9223B (Colilert) - Coliform Enumeration in Pools, Colilert-18

Suspected Agent	Coliforms
Test Name	*Coliform Enumeration in Pools, Colilert-18*
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Colilert-18
Acceptable Specimen(s)	Non-potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 8 hours for non-potable water samples.
Turnaround Time	2 business days
Related Tests	- Total and Fecal Coliforms in Food - Total Coliforms, SM23 9223B (Colilert) - Fecal Coliforms, Colilert-18

E

Suspected Agent	*Ehrlichia chaffeensis* and *Ehrlichia ewingii*
Test Name	The Detection of Tick E. *chaffeensis* and E. *ewingii* by a Duplex Real-Time PCR
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Qualitative duplex real-time PCR
Acceptable Specimen(s)	Tick
Specimen Collection/Preparation	Ticks are collected and stored in 2ml with pure ethanol
Storage/Transport Conditions	Tick samples in pure ethanol are stored at -70C once collected
Turnaround Time	Two weeks
Related Tests	The Detection of Tick R. rickettsii, R. parkeri, and R. amblyommatis by a Triplex Real-Time PCR; The Detection of TIck Francisella tularensis and Species Subtyping by Real-Time PCR

Suspected Agent	Enterococci
Test Name	Enterolert, SM23 9230D
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	SM23 9230D
Acceptable Specimen(s)	Non-potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 8 hours for non-potable water samples.
Turnaround Time	2 business days
Related Tests	N/A

Suspected Agent	*Escherichia coli*
Test Name	*Escherichia coli O157:H7 Detection in Food*
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in selective media followed by plating on differential media. PCR pre-screening of enrichments. Biochemical testing, latex agglutination, and serology for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	5-10 business days
Related Tests	- *Escherichia coli* (Enumeration), SM23 9223B (Colilert) - *Escherichia coli* Enumeration, Colilert-18 - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter*

Suspected Agent	*Escherichia coli*
Test Name	*Escherichia coli (Enumeration), SM23 9223B (Colilert)*
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	SM23 9223B (Colilert)
Acceptable Specimen(s)	Potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 30 hours for potable water samples and 8 hours for non-potable samples.
Turnaround Time	2 business days
Related Tests	- *Escherichia coli* O157:H7 Detection in Food - *Escherichia coli* Enumeration, Colilert-18 - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter*

F

Suspected Agent	Fluoride
Test Name	Fluoride, Total (EPA 300.0,R.2.1)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Ion chromatography EPA300.0
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	N/A

Suspected Agent	*Francisella tularensis*
Test Name	The Detection of Tick *Francisella tularensis* and Species Subtyping by Real-Time PCR
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Qualitative singleplex real-time PCR
Acceptable Specimen(s)	Tick
Specimen Collection/Preparation	Ticks are collected and stored in 2ml tube with pure ethanol
Storage/Transport Conditions	Tick samples in pure ethanol are stored at -70C once collected
Turnaround Time	Two weeks
Related Tests	The Detection of Tick E. chaffeensis and E. ewingii by a Duplex Real-Time PCR; The Detection of Tick R. rickettsii, R. parkeri, and R. amblyommatis by a Triplex Real-Time PCR

G

Suspected Agent	Gastrointestinal Pathogen Panel *Salmonella,* *Escherichia coli,* *Shigella,* *Listeria,* *Campylobacter*
Test Name	Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter*
Approval Required	N/A
Methodology	Whole genome sequencing
Acceptable Specimen(s)	Bacterial isolate
Specimen Collection/ Preparation	Pure cultures re-streaked from confirmed isolates
Storage/Transport Conditions	Isolates should be as fresh as possible (generally a few days). Transport and storage at ambient temperature
Related Tests	- Gastrointestinal Pathogen PCR Panel (clinical)

H

Suspected Agent	Heterotrophic Plate Count
Test Name	Heterotrophic Plate Count, SM23 9215B
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Pour plate method per SM23 9215B
Acceptable Specimen(s)	Potable water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterile wide-mouth collection bottles. For samples that contain or suspected to contain chlorine, a sodium thiosulfate tablet is included in the collection bottle
Storage/Transport Conditions	Samples are transported on ice. Time from collection to testing shall not exceed 30 hours for potable water samples.
Turnaround Time	3 business days
Related Tests	N/A

Suspected Agent	Histamine
Test Name	Histamine in Fish
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Competitive exclusion enzyme-linked immunosorbent assay
Acceptable Specimen(s)	Variety of fish (≥ 10 g) including tuna, mahi-mahi, marlin, bluefish, sardines, anchovy, bonito, herring and mackerel
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	1 business day
Related Tests	N/A

I

Suspected Agent	Influenza A
Test Name	Influenza A, Influenza B, SARS-CoV-2 and RSV Multiplexed Digital PCR in Wastewater
Approval Required	PHL Environmental Associate Director Phone: 212-671-5786
Methodology	Digital PCR
Acceptable Specimen(s)	Raw wastewater influent, or total nucleic acid extract
Specimen Collection/ Preparation	24-hour composite samples are collected from wastewater influent and submitted in sterile 500mL bottles and labeled with a unique identifier.
Storage/Transport Conditions	Raw wastewater samples are transported on ice and refrigerated until testing is initiated. Extracts should be stored at -80C and transported on dry ice.
Turnaround Time	5-10 days
Related Tests	Poliovirus Wastewater PCR

Suspected Agent	Influenza B
Test Name	Influenza A, Influenza B, SARS-CoV-2 and RSV Multiplexed Digital PCR in Wastewater
Approval Required	PHL Environmental Associate Director Phone: 212-671-5786
Methodology	Digital PCR
Acceptable Specimen(s)	Raw wastewater influent, or total nucleic acid extract
Specimen Collection/ Preparation	24-hour composite samples are collected from wastewater influent and submitted in sterile 500mL bottles and labeled with a unique identifier.
Storage/Transport Conditions	Raw wastewater samples are transported on ice and refrigerated until testing is initiated. Extracts should be stored at -80C and transported on dry ice.
Turnaround Time	5-10 days
Related Tests	Poliovirus Wastewater PCR

L

Suspected Agent	*Legionella*
Test Name	*Legionella Water Screening Real-Time PCR*
Approval Required	Office of Building Water System Oversight Phone: 718-786-5610
Methodology	Qualitative multiplex real-time RT-PCR
Acceptable Specimen(s)	Potable, Non-Potable Water (≥ 15 ml) and Swabs
Specimen Collection/ Preparation	Samples are collected in sterilized 250 ml bottles with sodium thiosulfate added to inactivate 15 mg/ml chlorine. Swabs contain a few ml of sample source water with sodium thiosulfate added.
Storage/Transport Conditions	Samples delivered to the lab and tested within 48 hours of collection and protected from sunlight and temperatures exceeding ambient. Samples received by the lab stored refrigerated until tested.
Turnaround Time	1-2 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Legionella*
Test Name	*Legiolert*
Approval Required	Office of Building Water System Oversight Phone: 718-786-5610
Methodology	Selective media for *Legionella pneumophila* based upon most probable number calculations
Acceptable Specimen(s)	Potable, Non-Potable Water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in sterilized 250 ml bottles with sodium thiosulfate added to inactivate 15 mg/ml chlorine.
Storage/Transport Conditions	Samples delivered to the lab and tested within 48 hours of collection and protected from sunlight and temperatures exceeding ambient. Samples received by the lab stored refrigerated until tested.
Turnaround Time	7 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Legionella*
Test Name	*Legionella Detection and Enumeration in Water, ISO11731:2017(E)*
Approval Required	Office of Building Water System Oversight Phone: 718-786-5610
Methodology	Classical microbiology using selective media, and physical and chemical pretreatments
Acceptable Specimen(s)	Potable, Non-Potable Water (≥ 200 ml) and Swabs
Specimen Collection/ Preparation	Samples are collected in sterilized 250 ml bottles with sodium thiosulfate added to inactivate 15 mg/ml chlorine. Swabs contain a few ml of sample source water with sodium thiosulfate added.
Storage/Transport Conditions	Samples delivered to the lab and tested within 48 hours of collection and protected from sunlight and temperatures exceeding ambient. Samples received by the lab stored refrigerated until tested.
Turnaround Time	10-14 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - Legiolert (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Legionella*
Test Name	*Legionella Species Confirmation and Serotyping*
Approval Required	Office of Building Water System Oversight Phone: 718-786-5610
Methodology	Qualitative multiplex real-time RT-PCR; auxotroph test
Acceptable Specimen(s)	Pure culture colonies on agar plates or slants
Specimen Collection/ Preparation	Pure cultures re-streaked from a suspected Legionella isolated colony grown on agar.
Storage/Transport Conditions	Agar plates and tubes should be freshly streaked cultures (few to several days), but isolates may be from samples received within the past year.
Turnaround Time	1-2 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Legionella*
Test Name	*Subtyping of Legionella spp. by Whole Genome Sequencing*
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Whole genome sequencing
Acceptable Specimen(s)	Bacterial isolate
Specimen Collection/ Preparation	Pure cultures re-streaked from confirmed isolates
Storage/Transport Conditions	Isolates should be as fresh as possible (generally a few days). Transport and storage at ambient temperature
Turnaround Time	5 business days
Related Tests	- *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - *Legionella* Water Screening Real-Time PCR (environmental) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Bacterial Subtyping by Pulsed-Field Gel Electrophoresis: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis* (environmental)

Suspected Agent	*Listeria monocytogenes*
Test Name	*Listeria monocytogenes* Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in selective media followed by plating on differential media. PCR pre-screening of enrichments. Biochemical testing, microscopy, and serology for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	7-10 business days
Related Tests	- *Listeria monocytogenes* Isolate Serotyping (clinical) - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental)

M

Suspected Agent	Magnesium
Test Name	Mg, Total (SM 23 3111B)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Flame atomic absorption spectrometry per SM 3111B
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	N/A

Suspected Agent	MRSA, Legionella, Enterobacter, Neisseria meningitidis
Test Name	Bacterial Subtyping by Whole Genome Sequencing: MRSA, *Legionella*, *Enterobacter* and *Neisseria meningitidis*
Approval Required	N/A
Methodology	Whole Genome Sequencing
Acceptable Specimen(s)	Bacterial isolate
Specimen Collection/ Preparation	Pure cultures re-streaked from confirmed isolates
Storage/Transport Conditions	Isolates should be as fresh as possible (generally a few days). Transport and storage at ambient temperature
Turnaround Time	7 business days
Related Tests	- MRSA/VISA Isolate Confirmation (clinical) - *Legionella* Culture (clinical) - *Legionella* Isolate Serotyping (clinical) - Legiolert (environmental) - *Legionella* Detection and Enumeration in Water, ISO11731:2017(E) (environmental) - *Legionella* Species Confirmation and Serotyping (environmental) - Subtyping of *Legionella* spp. by Whole Genome Sequencing (environmental) - *Neisseria meningitidis* Isolate Serotyping (clinical)

N

Suspected Agent	Nitrate
Test Name	Nitrate (as N) (EPA 300.0,R.2.1)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Ion chromatography EPA300.0
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	48 hours
Related Tests	N/A

O

Suspected Agent	Orthophosphate
Test Name	Orthophosphate (as P) (EPA 300.0,R.2.1)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Ion chromatography EPA300.0
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	48 hours
Related Tests	N/A

P

Suspected Agent	Poliovirus
Test Name	Poliovirus Wastewater PCR
Approval Required	PHL Assistant Commissioner Phone: 212-671-5669
Methodology	Real-Time RT-PCR
Acceptable Specimen(s)	Raw wastewater influent, or total nucleic acid extract
Specimen Collection/ Preparation	24-hour composite samples are collected from wastewater influent and submitted in sterile 500mL bottles and labeled with a unique identifier.
Storage/Transport Conditions	Raw wastewater samples are transported on ice and refrigerated until testing is initiated. Extracts should be stored at -80C and transported on dry ice.
Turnaround Time	5-10 days
Related Tests	Influenza A, Influenza B, SARS-CoV-2 and RSV Multiplexed Digital PCR in Wastewater

R

Suspected Agent	Respiratory syncytial virus (RSV)
Test Name	Influenza A, Influenza B, SARS-CoV-2 and RSV Multiplexed Digital PCR in Wastewater
Approval Required	PHL Environmental Associate Director Phone: 212-671-5786
Methodology	Digital PCR
Acceptable Specimen(s)	Raw wastewater influent, or total nucleic acid extract
Specimen Collection/ Preparation	24-hour composite samples are collected from wastewater influent and submitted in sterile 500mL bottles and labeled with a unique identifier.
Storage/Transport Conditions	Raw wastewater samples are transported on ice and refrigerated until testing is initiated. Extracts should be stored at -80C and transported on dry ice.
Turnaround Time	5-10 days
Related Tests	Poliovirus Wastewater PCR

Suspected Agent	*Rickettsia rickettsii* *Rickettsia parkeri* *Rickettsia amblyommatis*
Test Name	The Detection of Tick *R. rickettsii, R. parkeri*, and *R. amblyommatis* by a Triplex Real-Time PCR
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Qualitative triplex real-time PCR
Acceptable Specimen(s)	Tick
Specimen Collection/ Preparation	Ticks are collected and stored in 2ml tube with pure ethanol.
Storage/Transport Conditions	Tick samples in pure ethanol are stored at -70C once collected.
Turnaround Time	Two weeks
Related Tests	The Detection of Tick E. chaffeensis and E. ewingii by a Duplex Real-Time PCR; The Detection of TIck Francisella tularensis and Species Subtyping by Real-Time PCR

S

Suspected Agent	*Salmonella*
Test Name	*Salmonella* Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in sequential selective media followed by plating on differential media. PCR pre-screening of enrichments. Biochemical testing and Whole Genome Sequencing for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	7-14 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Suspected Agent	SARS-CoV-2
Test Name	Influenza A, Influenza B, SARS-CoV-2 and RSV Multiplexed Digital PCR in Wastewater
Approval Required	PHL Environmental Associate Director Phone: 212-671-5786
Methodology	Digital PCR
Acceptable Specimen(s)	Raw wastewater influent, or total nucleic acid extract
Specimen Collection/ Preparation	24-hour composite samples are collected from wastewater influent and submitted in sterile 500mL bottles and labeled with a unique identifier.
Storage/Transport Conditions	Raw wastewater samples are transported on ice and refrigerated until testing is initiated. Extracts should be stored at -80C and transported on dry ice.
Turnaround Time	5-10 days
Related Tests	Poliovirus Wastewater PCR

Suspected Agent	*Shigella*
Test Name	*Shigella* Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in selective media followed by plating on differential media. PCR pre-screening of enrichments. Biochemical testing for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	5-7 business days
Related Tests	- Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Suspected Agent	Solids, Total Dissolved
Test Name	Solids, Total Dissolved (SM 23 2540C)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Gravimetric method per SM 2540C
Acceptable Specimen(s)	Potable Water (≥ 250 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	7 calendar days
Related Tests	N/A

Suspected Agent	Specific Conductance
Test Name	Specific Conductance (SM 23 2510B)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Electrometric method per SM 2510B
Acceptable Specimen(s)	Potable Water (≥ 250 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	N/A

Suspected Agent	*Staphylococcus aureus*
Test Name	*Staphylococcus aureus Enterotoxin in Food*
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enzyme-linked fluorescent immunoassay
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation. Refrigerate until testing is initiated.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	1 business day
Related Tests	- Staphylococcus aureus Detection and Enumeration in Food

Suspected Agent	*Staphylococcus aureus*
Test Name	*Staphylococcus aureus Detection and Enumeration in Food*
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	PCR pre-screening and Dilution plating on selective media followed by biochemical testing (coagulase confirmatory) and microscopy.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	5-7 business days
Related Tests	- *Staphylococcus aureus* Enterotoxin in Food

Suspected Agent	Shiga-toxin-producing *Escherichia coli* (STEC)
Test Name	STEC (non-O157:H7) Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in selective media followed by plating on differential media. PCR pre-screening of enrichments. Biochemical testing, latex agglutination, and serology for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	5-10 business days
Related Tests	- Shiga Toxin-Producing *Escherichia coli* Rule Out (clinical) - Bacterial Subtyping by Whole Genome Sequencing: *Salmonella*, *Escherichia coli*, *Shigella*, *Listeria* and *Campylobacter* (environmental) - Gastrointestinal Pathogen PCR Panel (clinical)

Suspected Agent	Sulfate
Test Name	Sulfate (as SO4) (EPA 300.0,R.2.1)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Ion chromatography EPA300.0
Acceptable Specimen(s)	Potable Water (≥ 50 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	28 calendar days
Related Tests	N/A

T

Suspected Agent	Tick-borne pathogen panel *Borrelia burgdorferi, Anaplasma phagocytophilum, Babesia microti, Borrelia miyamotoi,* Powassan virus
Test Name	Tick Panel A Multiplex Real-Time RT-PCR
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Qualitative multiplex real-time RT-PCR
Acceptable Specimen(s)	Tick
Specimen Collection/ Preparation	Ticks are collected by vector control and stored in 2ml tube with pure ethanol.
Storage/Transport Conditions	Each tick samples in pure ethanol are stored in -70 freezer once Vector Control group submit the samples to the lab.
Turnaround Time	Two weeks
Related Tests	N/A

Suspected Agent	Turbidity
Test Name	Turbidity (SM23 2130 B or HACH 10258)
Approval Required	Office of Public Health Engineering Phone: 718-786-6004
Methodology	Nephelometry method per SM 2130B
Acceptable Specimen(s)	Potable Water (≥ 100 ml)
Specimen Collection/ Preparation	Samples are collected in clean water bottles with no treatment.
Storage/Transport Conditions	Sample to be kept cool and deliver to the lab within 8 hours after collection.
Turnaround Time	48 hours
Related Tests	N/A

V

Suspected Agent	*Vibrio parahaemolyticus, Vibrio cholerae,* *Vibrio vulnificus*
Test Name	Vibriobacter spp. Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Enrichment in selective media followed by plating on differential media. PCR pre-screening of enrichments. Potential colonies are cross-transferred to differential chromogenic media. Biochemical testing, microscopy, and serology are used for confirmation.
Acceptable Specimen(s)	Any Food (≥ 25 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	8-14 business days
Related Tests	- *Vibrio* spp. Isolate Identification (clinical) - Gastrointestinal Pathogen PCR Panel (clinical)

W

Suspected Agent	West Nile virus, Jamestown Canyon virus, Eastern Equine Encephalitis virus, La Crosse Encephalitis virus, and Saint Louis Encephalitis virus
Test Name	Arbovirus Multiplex rRT-PCR
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Quantitative RT-PCR
Acceptable Specimen(s)	Mosquito or mosquito pool
Specimen Collection/ Preparation	Mosquitoes are trapped in a nest and transported to the Entomological Laboratory in a cooler with dry ice. After species identification using the microscope, they were pooled and stored in a 2ml centrifuge tube.
Storage/Transport Conditions	Mosquito pool samples were stored -70 freezer.
Turnaround Time	3 business days
Related Tests	Mosquito West Nile Virus Sequencing

Suspected Agent	West Nile virus
Test Name	Mosquito West Nile Virus Sequencing
Approval Required	Office of Vector Surveillance Phone: 646-632-6640
Methodology	Illumina sequencing
Acceptable Specimen(s)	Mosquito pools
Specimen Collection/ Preparation	Mosquitoes are trapped in field and transported to the Entomological Laboratory in a cooler with dry ice. After species identification using the microscope, they were pooled and stored in a 2ml centrifuge tube.
Storage/Transport Conditions	Mosquito pool samples were stored -70 freezer.
Turnaround Time	Two weeks
Related Tests	Arbovirus Multiplex rRT-PCR

Y

Suspected Agent	*Yersinia enterocolitica*
Test Name	*Yersinia enterocolitic*a Detection in Food
Approval Required	Office of Environmental Investigations Phone: 347-865-5625
Methodology	Dilution plating on selective media followed by enumeration and confirmation using biochemical testing and microscopy.
Acceptable Specimen(s)	Any Food (≥ 11 g)
Specimen Collection/ Preparation	Samples are collected in original container or transferred to sterile bags or containers that are labeled with a unique identifier and accompanying documentation.
Storage/Transport Conditions	Refrigerate samples until testing is initiated. No phase changes (solid to liquid or liquid to solid) prior to testing.
Turnaround Time	4-5 business days
Related Tests	- *Yersinia* spp. Isolate Identification (clinical) - Gastrointestinal Pathogen PCR Panel (clinical)

Biothreat (LRN-Laboratory Response Network)

B

Suspected Agent	*Bacillus anthracis*
Test Name	*Bacillus anthracis* Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212-671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a blood agar plate with no additives/antibiotics, or blood slant. Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	- Clinical Biothreat Agent PCR Panel (biothreat)

Suspected Agent	*Brucella* spp.
Test Name	*Brucella* spp. Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212- 671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a blood or chocolate agar plate with no additives/antibiotics, or chocolate slant. Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	N/A

Suspected Agent	*Burkholderia mallei*
Test Name	*Burkholderia mallei* Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212-671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a blood agar plate with no additives/antibiotics, or blood slant Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	N/A

Suspected Agent	*Burkholderia pseudomallei*
Test Name	*Burkholderia pseudomallei* Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212-671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a blood agar plate with no additives/antibiotics, or blood slant Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	N/A

C

Suspected Agent	Clinical Biothreat Agent PCR Panel *Bacillus anthracis* *Francisella tularensis* *Yersinia pestis* Ebola virus (incl. *Bundibugyo*, *Tai Forest*, *Sudan*, *Zaires* species) Marburg virus
Test Name	Clinical Biothreat Agent PCR Panel
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative multiplex real-time PCR
Acceptable Specimen(s)	Whole Blood (EDTA) Minimum volume: 4 ml (adult); 1 ml (pediatric)
Specimen Collection/ Preparation	Collect two tubes of whole blood in tubes containing EDTA. Follow specimen collection, storage, and transport guidance provided by NYC DOHMH. For additional details, refer to CDC "Guidance for Collection, Transport, and Submission of Specimens for Ebola Testing".
Storage/Transport Conditions	Store and ship specimens refrigerated with cold packs within 24 hours of collection. Additional guidance and details will be provided by NYC DOHMH.
Turnaround Time	1 business day (Presumptive results)
Related Tests	- *Bacillus anthracis* Identification (biothreat) - *Francisella tularensis* Identification (biothreat) - *Yersinia pestis* Identification (biothreat) - Ebola Virus Real-Time RT-PCR (clinical)

Suspected Agent	*Clostridium botulinum* toxin
See	*Clostridium botulinum* Toxin Identification (clinical)

E

Suspected Agent	Ebola virus (*Zaire ebolavirus*)
Test Name	Ebola Virus Real-Time RT-PCR
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time RT-PCR
Acceptable Specimen(s)	Blood; plasma; serum; urine (when tested in conjunction with blood, plasma, or serum); Minimum volume: 4 ml (adult); 1 ml (pediatric)
Specimen Collection/ Preparation	Follow specimen collection and storage guidelines provided by DOHMH. For additional details, refer to CDC "Guidance for Collection, Transport, and Submission of Specimens for Ebola Testing".
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 24 hours. Additional guidelines and details are provided by DOHMH.
Turnaround Time	≤1 business day (Presumptive results)
Related Tests	- Clinical Biothreat Agent PCR Panel (biothreat)

F

Suspected Agent	*Francisella tularensis*
Test Name	*Francisella tularensis* Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, direct fluorescent antibody test, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212-671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a chocolate agar plate with no additives/antibiotics, or chocolate slant Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	- Clinical Biothreat Agent PCR Panel (biothreat)

M

Suspected Agent	Middle East Respiratory Syndrome (MERS) coronavirus
Test Name	MERS-CoV Real-Time RT-PCR
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Acceptable Specimen(s)	Nasopharyngeal swab and oropharyngeal swab in viral transport medium (3 ml); sputum (≥ 3 ml); bronchial aspirate/wash (≥ 3 ml);serum (≥ 5 ml)
Specimen Collection/ Preparation	Use a flocked, flexible-shaft nasopharyngeal or oropharyngeal swab and place in 3 ml of viral transport medium. Other specimen types should be collected in a sterile, leak-proof container.
Storage/Transport Conditions	Store and ship refrigerated with cold packs within 72 hours from collection. If specimens are shipped after 72 hours from collection, freeze at -70°C and ship with dry ice.
Turnaround Time	3-5 business days
Related Tests	N/A

O

Suspected Agent	*Orthopoxvirus* (variola and non-variola *orthopoxvirus* [cowpox, camelpox, MPXV, etc])
Test Name	Smallpox Ruleout Panel
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600
Methodology	Qualitative real-time RT-PCR
Acceptable Specimen(s)	Dry swab
Specimen Collection/ Preparation	Collect two swabs from each lesion collected. Transfer swab in its own separate sterile container (i.e., conical tube or urine cup). Break off the end of the applicator if possible.
Storage/Transport Conditions	Within one hour of collection, place specimens in a refrigerator (2–8°C) or freezer (-20°C or lower). Refrigerated or frozen specimens should be sent to PHL within 5 days of collection. Refrigerated specimens must be sent with cold packs, while frozen specimens must be sent on dry ice.
Turnaround Time	1-3 business days
Related Tests	N/A

Y

Suspected Agent	*Yersinia pestis*
Test Name	*Yersinia pestis* Identification
Approval Required	Bureau of Communicable Diseases Phone: 347-396-2600 After hours contact Poison Control and ask for the PHL Duty Officer on Call. Phone: 212-764-7667
Methodology	Qualitative real-time PCR, direct fluorescent antibody test, culture-based tests
Acceptable Specimen(s)	Bacterial culture isolate(s). For all other sample types please contact the laboratory to discuss. Phone: 212-671-5834
Specimen Collection/ Preparation	Bacterial culture isolate on a blood agar plate with no additives/antibiotics, or blood slant. Plates must be taped shut prior to submission.
Storage/Transport Conditions	Room temperature
Turnaround Time	1 business day (Presumptive results)
Related Tests	- Clinical Biothreat Agent PCR Panel (biothreat)