



State of Illinois
Illinois Department of Public Health

Illinois Department of Public Health

Division of Laboratories

Manual of Services

November 2013

Mission Statement

The mission of the Illinois Department of Public Health's Division of Laboratories is to support public health epidemiology programs by providing surveillance data.

Introduction

The Division of Laboratories serves Illinois' public health system and environmental protection network with quality diagnostic and analytical laboratory testing. As enormous strides continue to take place in all medical and scientific disciplines, division personnel located in Chicago, Springfield and Carbondale strive to maintain advanced laboratory capabilities in order to improve public health and environmental quality throughout Illinois. The Division of Laboratories participates in numerous certification programs to ensure the accuracy of testing data. The following is a list of those certification programs:

- Clinical Laboratory Improvement Amendments (CLIA) - Each laboratory in the division has a CLIA certificate. The objective of the CLIA program is to ensure quality clinical laboratory testing.
- Federal Select Agent Program - Each laboratory in the division has a Select Agent certificate. This certificate is necessary for biological threat agent testing.
- American Industrial Hygiene Association Environmental Lead Laboratory Accreditation Program (ELLAP) – The Chicago laboratory is accredited to test paint, soil, dust wipes, and air to determine the level of lead in these samples.
- Certified water microbiology and dairy laboratories. The Carbondale and Chicago laboratories in the division are certified by the Illinois Department of Public Health's certification/evaluation officers to perform water and dairy testing.
- Illinois Environmental Laboratory Accreditation Program (IL ELAP) – The Springfield laboratory is accredited to test drinking water for nitrate, nitrite, fluoride, and pH determination.
- U. S. Food and Drug Administration (FDA) – The Springfield laboratory holds a certificate for dairy laboratory grade testing.

This manual is a guide to the tests offered by the Illinois Department of Public Health, Division of Laboratories, and describes the requirements for submitting samples. At times, it may be difficult to meet these requirements; without them, however, the test may be impossible to perform or the quality of results may be compromised. The quality of the laboratory's work depends directly on the quality of samples submitted. By observing these sample requirements, clients help the laboratory to provide uncompromised, quality test results. All shipping of clinical materials and isolates must be in compliance with the rules and regulations for transport of infectious substances as set forth by the U. S. Department of Transportation, U. S. Postal Service, and the International Air Transport Association – Dangerous Goods regulations.

By sending samples to the laboratory, clients enter into a partnership. As in any partnership, good communication is the key to success. That is the purpose of this manual, to provide quick information about each of the tests performed and some special requirements for those tests. There will be times when more information is needed than this manual can provide. Appropriate laboratory phone numbers are provided on the first page of this manual. Interpretative consultations for all clinical tests performed by Illinois Department of Public Health laboratories are available to all authorized submitters from the director of laboratories or the clinical consultant.

Authorization for submitting specimens for testing

This manual of services covers a large number of testing areas. Each test performed by the Division of laboratories is in support of the Illinois Department of Public Health's mission, to support public health programs by providing surveillance data. As a result, it is critical that the testing services provided are authorized by the relevant local health departments and Illinois Department of Public Health programs. Throughout this manual of services, information about the requirements to authorize the submission of specimens is provided. Authorization to obtain testing services is based on the need for public health

surveillance data with consideration of available private testing availability. Samples or specimens submitted to the laboratory without proper authorization will not be tested. Laboratory staff will contact the submitter and determine if the sample/specimen will be returned or destroyed.

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General Specimen/Sample Requirements and Information

It is vital to ensure that the quality of samples is not compromised, the etiological agents remain viable, and the samples do not endanger the safety of those delivering or receiving them. The laboratories are required to reject any sample that is leaking or otherwise unsafe. The laboratory will be able to complete testing of samples without delay, if submitter:

- Provides all the information requested on the appropriate submission form.
- Sends pure cultures on fresh media in the appropriate transport container.
- Avoids sending cultures on inhibitory media.
- Packages sample containers in a leak-proof inner container, ensures that caps are tight to prevent leakage, uses custody seals for environmental samples.
- Follows proper chain of custody procedures when submitting forensic samples or samples submitted for regulatory enforcement.
- Observes any special temperature requirements.
- Ensures the outside of the mailing container indicates which laboratory section is to receive the samples (e.g., Enteric, Bacteriology, Parasitology, Environmental Chemistry).
- Avoids shipping over the weekend, except in an emergency.
- Conforms to current U.S. Postal Service regulations when shipping by U.S. mail.
 - Contact your local post office for more information on these regulations.
- Conforms to current U.S. Department of Transportation regulations when shipping by courier or other means.

Each test performed by the Division of Laboratories is in support of the Illinois Department of Public Health's mission, to support public health programs by providing surveillance data. As a result, it is critical that the reports for tests conducted by the Division of Laboratories are provided to submitters, local health departments and the Illinois Department of Public Health programs. Results are provided through a combination of mechanisms which included electronic laboratory reporting, fax and mailed paper results. If you have questions about a particular test and the mechanism by which it is reported, contact the Springfield laboratory at 217-782-6562 and speak to the data management staff..

Division of Laboratories – Hours and Contact Information

Each laboratory location is open and accepts samples/specimens during regular business hours Monday – Friday. Division of Laboratories hours are 8 a.m. - 4:30 p.m. except on state designated holidays. The state of Illinois holiday schedule is available by clicking this link: [Holiday schedule](#)

To contact the Illinois Department of Public Health
TTY (hearing impaired use only) 800-547-0466

Chicago Laboratory

Illinois Department of Public Health

Division of Laboratories

2121 W. Taylor St.

Chicago, IL 60612-4224

Main Number (all sections)

312-793-4760

(Fax) 312-793-1322

Springfield Laboratory

Illinois Department of Public Health

Division of Laboratories

825 N. Rutledge St.

Springfield, IL 62702-4910

Main Number (all sections)

217-782-6562

(Fax) 217-524-7924

Carbondale Laboratory

Illinois Department of Public Health

Division of Laboratories

1155 S. Oakland Ave.

Carbondale, IL 62902

Main Number (all sections)

618-457-5131

(Fax) 618-457-6995

Emergency Response Procedures

Assistance for after-hour emergencies (e.g., human exposure to a potentially rabid animal) is available through the Illinois Emergency Management Agency (IEMA) statewide emergency response system. In these special cases, arrangements can be made to submit samples/specimens or to report public health emergencies by calling the following:

Within Illinois	217-782-7860
Outside Springfield area	800-782-7860
TTY (hearing impaired use only)	800-547-0466

Ask to be directed to the Illinois Department of Public Health's emergency officer. They can provide you further instructions. If warranted, the emergency officer will arrange to have the closest Illinois Department of Public Health laboratory open to receive the samples/specimens and to begin testing that same day.

If a natural or other emergency event causes the closure of one laboratory within the division, testing services may be transferred to another laboratory within the division. In this way, surge capacity for division is provided by other Illinois Department of Public Health laboratories or through contractual arrangements with other private or public facilities.

Services Available at U.S. Centers for Disease Control and Prevention

Collaboration between local, state and federal laboratories provides the foundation for a successful nationwide program for the prevention and control of infectious diseases. The U.S. Centers for Disease Control and Prevention (CDC) provides state laboratories with reference and diagnostic services (RDS) for certain rare or unusual procedures. **All RDS samples must be submitted to the CDC by or through the state laboratories.**

The Illinois Department of Public Health's Division of Laboratories is available to facilitate submission of specimens to CDC for testing that is not available through commercial resources. Submission of specimens to CDC laboratories also requires approval from your local health department or the applicable Illinois Department of Public Health's Division of Infectious Disease. If you have questions about submission of specimens to CDC for testing, please contact your local health department or the Illinois Department of Public Health at 217-782-2016.

Once approval to submit the specimen has been obtained through the Illinois Department of Public Health's Division of Infectious Disease or local health department, work with your regional public health laboratory in Carbondale, Springfield or Chicago to complete the appropriate submission form. The CDC may reject the specimen if complete data are not provided. **Do not ship the specimen directly to CDC unless prior arrangements have been made with the Illinois Department of Public Health.**

CDC provides RDS for:

- Clinical samples to aid in the diagnosis of life-threatening, unusual or exotic infectious diseases.
- Cultures, paired serum samples or both from patients suspected of having unusual or infectious diseases.
- Cultures or serum samples obtained from patients who have sporadic infections or who are involved in an outbreak from an organism for which testing reagents are not commercially or widely available.
- Organisms that
 - a) cannot be identified otherwise.
 - b) are isolated from normally sterile anatomic sites.
 - c) are isolated repeatedly from one or more sites of the same patient or group of patients.
 - d) have atypical phenotypic characteristics.
 - e) do not appear to be a "usual" pathogen.
 - f) are associated with nosocomial infections.
- Clinically important serum samples or cultures sent for confirmation.

Environmental Laboratory Certification

The Illinois Department of Public Health has been designated by the U.S. Department of Health and Human Services and the U.S. Environmental Protection Agency as the certifying agency for approval of microbiological laboratories processing official samples of milk and water. The laboratory certification program ensures that approved laboratories use methods and techniques that are in substantial agreement with the current editions of the *Grade A Pasteurized Milk Ordinance*, *Standard Methods for the Examination of Water and Wastewater*, and Official Methods of Analysis of the A.O.A.C. (Association of Official Analytical Chemists). Training workshops and seminars are given to provide continuing education and regulatory updates to environmental laboratory personnel.

Guidelines to Follow for Certification of Milk Laboratories and Certified Industry Supervisors of Milk Drug Sites (Capable of Confirming Screening Results)

1. The applicant seeking certification shall contact the Illinois Department of Public Health's laboratory evaluation officer to receive a packet containing the Grade A milk laboratory request and agreement form, a copy of the evaluation forms, and personnel questionnaire forms.
2. When the applicant feels the requirements can be met, a written request shall be sent to:
Laboratory Evaluation Officer
Illinois Department of Public Health Laboratory
825 N. Rutledge St.
Springfield, IL 62794-9435
3. Following receipt of the request, the laboratory evaluation officer will, upon a mutually agreeable date, perform an on-site survey including the evaluation of facilities, equipment, procedures and preliminary quality control records according to the requirements of the *Grade A Pasteurized Milk Ordinance*.
4. Upon successfully meeting the requirements of the evaluation, accreditation is given to the laboratory and conditional certification is given to the certified industry supervisors and analysts.
5. Split milk samples are provided by the Illinois Department of Public Health to all milk laboratories and certified industry supervisors annually. Analyses of split samples are required by all industry supervisors and analysts and approval shall be revoked for lack of participation or poor performance for two successive submissions.
6. Every two years, certified laboratories and certified industry supervisor sites shall be re-evaluated through on-site inspection by laboratory certification officers.

Guidelines to Follow for Approval of Milk Drug (Antibiotics) Screening Sites

1. The applicant seeking certification shall contact the Illinois Department of Public Health's laboratory evaluation officer to receive a packet containing the Grade A milk laboratory request and agreement form, a copy of the evaluation forms, and personnel questionnaire forms.
2. When the applicant feels the requirements can be met, a written request shall be sent to:
Laboratory Evaluation Officer
Illinois Department of Public Health Laboratory
825 N. Rutledge St.
Springfield, IL 62794-9435
3. Following receipt of the request, the laboratory evaluation officer will provide training for the prospective industry supervisor. Upon completion of training, the industry supervisor will provide documented training of all prospective analysts. A copy of all training records will be submitted to the laboratory evaluation officer.
4. Upon receipt of the training records, the laboratory evaluation officer will, upon a mutually agreeable date, perform an on-site survey and evaluation of facilities, equipment, performance, procedures and preliminary quality control records.
5. Upon successfully meeting the requirements of the evaluation, approval is given to the milk drug testing site/industry supervisor and analysts.

6. Split milk samples are provided by the Illinois Department of Public Health to all milk drug testing sites annually. Analyses of split samples are required by all industry supervisors and analysts and approval shall be revoked for lack of participation or poor performance for two successive submissions.
7. Every two years, approved drug screening sites shall be re-evaluated through on-site inspection by laboratory evaluation officers.
8. It is the responsibility of the approved industry supervisor to train all new analysts and subsequently send training records to the laboratory evaluation officer. Upon review of the training record, the laboratory evaluation officer will either notify the supervisor that training is inadequate or issue a statement that training is acceptable and the analyst is approved to screen milk samples for drugs (antibiotics).

Guidelines to Follow for Certification of Water Laboratories

1. The applicant seeking certification shall contact the Illinois Department of Public Health's laboratory certification officer to receive a packet containing a copy of the regulations and requirements, a request for laboratory certification form and a copy of the evaluation and personnel questionnaire forms.
2. When the applicant feels the requirements can be met, a written request shall be sent to:
Laboratory Certification Officer
Illinois Department of Public Health Laboratory
825 N. Rutledge St.
Springfield, IL 62794-9435
3. Following receipt of the request, the laboratory certification officer will, upon a mutually agreeable date, perform an on-site survey and evaluation of facilities, equipment, performance, procedures and preliminary quality control records. The quality assurance plan must be prepared and in use at the time of the evaluation. Proficiency test samples must be successfully analyzed prior to the evaluation date.
4. Periodic analyses of proficiency test samples are required and laboratory certification shall be revoked for lack of participation or poor performance for two successive submissions.
5. Every two years, certified laboratories shall be re-evaluated through on-site inspection by laboratory certification officers.

Adenovirus, Molecular Screen

Test Name:	Detection of Adenovirus
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of Adenovirus, types B/E and C
Reference Ranges:	Negative for the detection of Adenovirus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within seven days of collection on cold packs (4°C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Illinois Department of Public Health program approval required for all submissions. Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form Note indicate on the bottom of the form that you are requesting the Respiratory Viral Panel assay along with the outbreak number.

Arbovirus Overview

The Illinois Department of Public Health Chicago Laboratory and the CDC offer testing to confirm infection with an Arbovirus by the detection of anti-arboviral antibodies in serum and cerebrospinal fluid (CSF). We do not offer assays that test directly for the virus (such as polymerase chain reaction) since the virus is usually cleared from the blood/CNS before specimens can be collected. When serum is submitted it is best to send both acute and convalescent specimens for the most definitive determination of infection.

What Arboviruses do we test for?

1. [California Encephalitis virus \(CEV\)](#)
2. [Dengue virus \(DV\)](#)
3. [Eastern Equine Encephalitis virus \(EEEV; tested by the CDC\)](#)
4. [Saint Louis Encephalitis virus \(SLEV\)](#)
5. [Western Equine Encephalitis virus \(WEEV; tested by the CDC\)](#)
6. [West Nile virus \(WNV\)](#)

What tests are performed?

1. Screening assays for the presence of IgM antibody including:
 - a. The Microsphere Immunofluorescence (MIA) assay detects antibodies to WNV and SLE
 - b. The IgM antibody-capture enzyme-linked immunosorbent assay (MAC ELISA) detects antibodies to DV and CEV.
2. A plaque reduction (antibody) neutralization test (PRNT) is performed for specimens that test:
 - a. WNV Detected
 - b. SLE Positive or Indeterminate
 - c. CEV Positive or Equivocal
 - d. DV Positive or Equivocal (performed at the CDC)

Authorization for testing is required

For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.

Submission Form

An original submission form must accompany all specimens
([Arbovirus Test Requisition Form](#))

***Bacillus anthracis* (Anthrax)**

Test Name:	Identification of <i>Bacillus anthracis</i> (potential bioterror agent)		
Method Name:	Rapid presumptive identification by real-time polymerase chain reaction (PCR) assay. Confirmation by biochemical identification of culture isolate		
Results:	Negative/Positive for the identification of <i>B. anthracis</i>		
	<i>Note: If the test is negative and the isolate is genus Bacillus, speciation will not be performed.</i>		
Reference Ranges:	Negative for <i>B. anthracis</i>		
Clinical Significance:	Humans can become infected with B. anthracis by handling products or consuming undercooked meat from infected animals. Infection may also result from inhalation of <i>B. anthracis</i> spores from contaminated animal products such as wool or the intentional release of spores during a bioterrorist attack. Human-to-human transmission has rarely been reported, and only with the cutaneous form of the disease. Three forms of anthrax occur in humans: cutaneous, gastrointestinal, and inhalation.		
Submission Criteria:	Request testing if you suspect an isolate may be <i>B. anthracis</i> . See asm.org for the rule-out/in protocols. Submit a pure isolate/culture submitted on an agar slant with any media that will support growth. Do not submit the isolate on an agar plate unless the specimen is being transported by courier. Do not perform further tests. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.		
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.		
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.		
Turnaround Time:	One day for presumptive PCR, four days for culture confirmation		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form		

Bacillus cereus

Test Name:	Isolation and identification of <i>B. cereus</i>	
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>B.cereus</i> .	
Results:	Positive/Negative for the detection of <i>B. cereus</i>	
Reference Ranges:	Negative for the detection <i>B. cereus</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen. Toxin testing may be requested.	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Authorization:	Authorization for specimen submission is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016. Specimens are referred to the Wisconsin State Hygiene Laboratory in Madison or CDC.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562	
Submission Form:	Communicable Disease Test Requisition Form	

Bioterrorism Threat Agents

The Illinois Department of Public Health laboratories test for the presence of the following potential bioterrorism threat agents:

Biothreat Agent*	Disease	Preferred Specimen Type(s)
<i>Bacillus anthracis</i>	Anthrax	Referred Isolate
<i>Brucella spp.</i>	Brucellosis	Referred Isolate
<i>Burkholderia pseudomallei/mallei</i>	Melioidosis/Glanders	Referred Isolate
<i>Coxiella burnetii</i>	Q Fever	Whole blood
<i>Francisella tularensis</i>	Tularemia	Referred Isolate
<i>Variola virus</i>	Smallpox	Swabs; scabs
<i>Yersinia pestis</i>	Plague	Referred Isolate

*See links for more information on specimen collection and submission for each threat agent

The sentinel laboratory plays a key role in the early detection of these threat agents by recognizing the potential of having isolated one of the bacterial agents or that a patient presents with clinical symptoms consistent with the contraction of the agent. The [American Society of Microbiology](#) has developed protocols for your use in the presumptive identification of a bacterial threat agent (see link) and the CDC has developed an algorithm for clinical diagnosis of the various disease syndromes caused by the orthopox viruses (including Smallpox).

If you, as a sentinel laboratory suspect a patient infected with any of these agents you should contact your local or state public health department for consultation and authorization for further testing and identification of the threat agent at the state laboratory. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.

The Illinois Department of Public Health utilizes protocols developed by the U.S. Centers for Disease Control and Prevention's Laboratory Response Network for the definitive identification of the biothreat agents. If an isolate tests negative for a biothreat agent further identification will NOT be performed.

Environmental sample testing is also available through special arrangement for Biological Threat agents. Please contact the Division of Laboratories if environmental testing is requested.

***Bordetella pertussis* (Whooping Cough)**

Test Name:	Molecular Detection of <i>Bordetella pertussis</i> , <i>parapertussis</i> and <i>holmesii</i>
Method Name:	Detection of <i>Bordetella</i> spp. DNA by real-time polymerase chain reaction assay
Results:	Positive/Negative for <i>Bordetella pertussis</i> DNA Positive/Negative for <i>Bordetella parapertussis</i> DNA Positive/Negative for <i>Bordetella holmesii</i> DNA
Reference Range:	Negative for the detection of <i>Bordetella</i> spp. DNA
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of <i>B. pertussis</i> . See the Illinois Department of Public Health's Communicable Disease intranet website for more information about the disease.
Submission Criteria:	Acceptable specimens include nasopharyngeal swabs, aspirates, and washes; referred cultures. Use only dacron or rayon nasopharyngeal swabs; note that calcium alginate swabs are not acceptable as they may inhibit the PCR reaction. See the following CDC link for detailed instructions on the proper procedure for collecting the specimen. Note that specimens should not be collected in the same area used for administering vaccinations. The vaccine DNA can contaminate the environment and lead to false positive results for the patient's specimen. Transport the swab in Regan- Lowe medium tubes with wet ice packs (4 degrees C).
Rejection Criteria:	Unacceptable specimen type submitted; improperly filled out requisition; no patient identifier on the specimen tube; broken/leaking specimen tube; specimens shipped at the improper temperature; specimens received greater than 14 days after collection; use of calcium alginate swab for specimen collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact the Communicable Disease Control Section of the Illinois Department of Public Health at 217-785-7165.
Turnaround Time:	Three days
Shipping:	IDPH – Carbondale Lab Molecular Laboratory 1155 S. Oakland Ave. Carbondale, IL 62902
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Communicable Disease Test Requisition Form

Brucella spp. (brucellosis)

Test Name:	Culture identification of <i>Brucella spp.</i> (potential biothreat agent)
Method Name:	Rapid presumptive identification by real-time polymerase chain reaction (PCR) assay. Confirmation by biochemical identification of culture isolate
Results:	Negative/Positive for <i>Brucella spp.</i> , <i>Brucella abortus</i> , <i>Brucella suis</i> , <i>Brucella melitensis</i> , or <i>Brucella canis</i> <i>If the tests are negative and the isolate is the genus Brucella, further speciation tests will not be performed.</i>
Reference Ranges:	Negative for <i>Brucella spp.</i>
Clinical Significance:	<u>Brucella spp.</u> are facultative intracellular gram negative staining bacilli capable of producing the disease " <u>Brucellosis</u> " in humans. The disease is likely acquired by contact with animals infected with <i>Brucella abortus</i> , <i>Brucella suis</i> , <i>Brucella melitensis</i> , and occasionally <i>Brucella canis</i> or by ingestion of infected meat or milk. Animals most commonly infected include sheep, cattle, goats, pigs, and dogs. Symptoms of brucellosis may include fever, night sweats, chills, weakness, malaise, headache, and anorexia. A physical examination may reveal lymphadenopathy and hepatosplenomegaly. A definitive diagnosis of brucellosis is made by recovering the organism from blood, fluid (including urine), or tissue specimens.
Submission Criteria:	Request testing if you suspect an isolate may be <i>Brucella spp.</i> See <u>asm.org</u> for the rule-out/in protocols. Submit a pure isolate/culture submitted on an agar slant with any media that will support growth. Do not submit the isolate on an agar plate unless the specimen is being transported by courier. Primary clinical specimens or blood culture bottles are not acceptable specimens. Do not perform further tests. Note: Brucellosis is the most commonly reported laboratory-associated bacterial infection. Certain characteristics of the bacterium, such as its low infectious dose and ease of aerosolization contribute to the risk of infection by the organism in a laboratory setting. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out <u>Communicable Disease Test Requisition Form</u> ; no patient identifier on specimen; broken specimen tube; no authorization for testing.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	One day for presumptive PCR, Five to seven days for culture confirmation
Shipping:	IDPH – Chicago Lab IDPH-Springfield Lab IDPH – Carbondale Lab Clinical Microbiology Clinical Microbiology Clinical Microbiology 2121 W. Taylor St. 825 N. Rutledge St. 1155 S. Oakland Ave. Chicago, IL 60612 Springfield, IL 62702 Carbondale, IL 62902
Submission Form:	<u>Communicable Disease Test Requisition Form</u>

***Burkholderia pseudomallei* (Meliodosis)**
***Burkholderia mallei* (Glanders)**

Test Name:	Identification of <i>Burkholderia pseudomallei</i> and <i>Burkholderia mallei</i> (<u>potential biothreat agents</u>)
Method Name:	Rapid presumptive identification by real-time polymerase chain reaction (PCR) assay Confirmation by biochemical identification of culture isolate
Results:	Negative/Positive for the identification of <i>Burkholderia pseudomallei</i> Negative/Positive for the identification of <i>Burkholderia mallei</i> <i>If the tests are negative and the isolate is the genus Burkholderia, further speciation will not be performed.</i>
Reference Ranges:	Negative for the identification of <i>B. pseudomallei</i> and <i>B. mallei</i>
Clinical Significance:	<i>B. pseudomallei</i> is the cause of melioidosis, a disease prevalent in Southeast Asia and northern Australia. Chronic infections can mimic <i>Mycobacterium tuberculosis</i> infections by producing granulomatous lesions in tissues. <i>B. mallei</i> causes glanders. Acute infections cause septicemia and death while chronic infections cause nodules that can ulcerate. Survivors can be carriers. Definitive confirmation of infection is critical for effective antibiotic therapeutic intervention.
Submission Criteria:	Request testing if you suspect an isolate may be <i>Burkholderia spp.</i> See asm.org for the rule-out/in protocols. Submit a pure isolate/culture submitted on an agar slant with any media that will support growth. Do not submit the isolate on an agar plate unless the specimen is being transported by courier. Primary clinical specimens or blood culture bottles are not acceptable specimens. Do not perform further tests. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube; no authorization for testing.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	One day for presumptive PCR, Four days for culture confirmation
Shipping:	IDPH – Chicago Lab IDPH-Springfield Lab IDPH – Carbondale Lab Clinical Microbiology Clinical Microbiology Clinical Microbiology 2121 W. Taylor St. 825 N. Rutledge St. 1155 S. Oakland Ave. Chicago, IL 60612 Springfield, IL 62702 Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form

California Encephalitis Virus

Test Name:	Identification of California encephalitis virus (CEV) Infection	
Method Name:	Detection of IgM antibodies to CEV using antibody capture enzyme linked immunosorbent assay (MAC-ELISA)	
	Detection of CEV antibodies by viral neutralization in culture (reflex assay for positive/equivocal MAC-ELISA assay)	
Results:	Results for ELISA screen: negative/positive/equivocal	
	Results for Viral Neutralization: Neutralizing Antibody detected to California-LaCrosse virus/No Neutralizing Antibody	
Reference Ranges:	Negative for the detection of CEV antibodies	
Clinical Significance:	Early detection helps in the clinical management and for the identification of CEV outbreaks.	
Submission Criteria:	Acceptable specimens (patients must be 18 years or younger) include: <ul style="list-style-type: none">a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i>b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection	
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; patients older than 18 years; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30days.	
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.	
Turnaround Time:	Seven days for the ELISA assay, neutralization confirmation if necessary	14 days for viral
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612	
Submission Form:	Arbovirus Test Requisition Form	

**Neisseria gonorrhoeae/Chlamydia trachomatis
(Molecular STD Screening Panel)**

Test Name: Detection of *Neisseria gonorrhoeae* (NG) and/*Chlamydia trachomatis* (CT)

Method Name: Becton Dickinson ProbeTec™ Q^x Amplified DNA Assay

Results: Positive/Negative for the detection of *Neisseria gonorrhoeae* (NG) and/or *Chlamydia trachomatis* (CT)

Reference Ranges: Negative for the detection of *Neisseria gonorrhoeae* and/*Chlamydia trachomatis*

Clinical Significance: *Neisseria gonorrhoeae* infection of women can lead to pelvic inflammatory disease, infertility, ectopic pregnancy and chronic pelvic pain. In men *Neisseria gonorrhoeae* can lead to acute urethritis and dysuria. *Chlamydia trachomatis* infections in women can cause long-term sequelae such as pelvic inflammatory disease and infertility, in addition to the birth of underweight babies. *Chlamydia trachomatis* –infection of men can result in acute urethritis or epididymitis and chronic proctitis. Transmission of *N. gonorrhoeae* and *C. trachomatis* occurs through sexual contact but can also take place in the birth canal leading to neonatal conjunctivitis and/or *Chlamydia pneumonia*.

Submission Criteria: Use only the Female Endocervical Specimen collection, Male Urethral Specimen collection, and Urine Preservation Kits intended for the BD ProbeTec CT/GC Q^x Amplified DNA Assays.

Rejection Criteria: The specimen is too old for testing (must be tested within 30 days of collection and be stored at 2 C - 30 C); expired swab collection kit or urine transport tube; no identifier on specimen (e.g. barcode, name, etc.); culturette or liquid transport tube does not contain a swab, contains urine, contains a substituted swab, contains more than one swab or contains a culturette tube that is not validated; the urine container is empty or contains insufficient quantity (QNS) for testing; the meniscus of the preserved urine in the BD-Q^x Urine preservative transport kit does not appear in the “Fill Window” 2.0 to 3.0 ml; improper specimen submitted.

Authorization: Providers are authorized by the Illinois Department of Public Health Office of Health Protection, STD Section at 217-782-2747. A provider number will be given which should be included on the submission form.

Turnaround Time: Four days

Shipping:	IDPH – Chicago Lab	IDPH – Carbondale Lab
	STI Laboratory	STI Laboratory
	2121 W. Taylor St.	1155 S. Oakland Ave.
	Chicago, IL 60612	Carbondale, IL 62902

Shipping Kits: Contact the Springfield laboratory at 217-782-6562 or the Chicago laboratory at 312-793-4760 to request shipping kits.

Submission Form: Collection and shipping kits are provided by the Division of Laboratories. Please use only original forms. Do not photocopy.

Clostridium perfringens

Test Name:	Isolation and identification of <i>Clostridium perfringens</i>	
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>Clostridium perfringens</i> .	
Results:	Positive/Negative for the detection of <i>Clostridium perfringens</i>	
Reference Ranges:	Negative for the detection <i>Clostridium perfringens</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab (discard half of the fluid before adding swab); received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen. Toxin testing may be requested.	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016. Specimens are referred to the Wisconsin State Hygiene Laboratory in Madison or CDC.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	NA	
Submission Form:	Communicable Disease Test Requisition Form	

***Corynebacterium diphtheriae* Identification**

Test Name:	Identification of <i>Corynebacterium diphtheriae</i>
Method Name:	Biochemical identification of <i>Corynebacterium diphtheriae</i> and its toxin (test performed by the CDC)
Results:	Positive/Negative for the detection of <i>Corynebacterium diphtheriae</i> and its toxin
Reference Ranges:	Negative for the detection of <i>Corynebacterium diphtheriae</i> and its toxin
Clinical Significance:	<i>C. diphtheriae</i> is the most pathogenic of the Corynebacteria. The diagnosis is usually made on the clinical history followed by culture confirmation. The toxigenicity test determines the pathogenicity of <i>C. diphtheriae</i> .
Submission Criteria:	Collect specimen from beneath the pseudomembranous area using a cotton or polyester tipped swab. Specimens should be sent to the Illinois Department of Public Health at ambient temperatures and as soon as possible after collection to ensure viability of the organism. Toxin testing may be requested.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Approximately four weeks
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612 312 -793-4747
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

***Coxiella burnetii* (Q Fever), Molecular**

Test Name:	Identification of <i>C. burnetii</i>
Method Name:	Polymerase Chain Reaction (PCR) for <i>C. burnetii</i>
Results:	Negative /Positive/Presumptive for the identification of <i>C. burnetii</i>
Reference Ranges:	Negative for the identification of <i>C. burnetii</i>
Clinical Significance:	<p>Q fever is a worldwide disease with acute and chronic stages caused by the bacteria <i>Coxiella burnetii</i>. Cattle, sheep, and goats are the primary reservoirs although a variety of animal species may be infected. Organisms are excreted in milk, urine, and feces of infected animals. At birth, the organisms are shed in high numbers within the amniotic fluids and the placenta. The organism is extremely hardy and resistant to heat, drying, and many common disinfectants which enable the bacteria to survive for long periods in the environment. Infection of humans usually occurs by inhalation of these organisms from air that contains airborne barnyard dust contaminated by dried placental material, birth fluids, and excreta of infected animals. Other modes of transmission to humans, including tick bites, ingestion of unpasteurized milk or dairy products, and human to human transmission, are rare. Humans are often very susceptible to the disease, and very few organisms may be required to cause infection.</p>
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Whole bloodb. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	One day
Shipping:	IDPH – Chicago Lab IDPH-Springfield Lab Molecular Laboratory Clinical Microbiology 2121 W. Taylor St. 825 N. Rutledge St. Chicago, IL 60612 Springfield, IL 62702
Submission Form:	Communicable Disease Test Requisition Form

Coxsackie Virus

Test Name:	Detection of Coxsackie Virus
Method Name:	Identification of Coxsackie virus in culture using a Indirect Fluorescent Antibody Assay
Results:	Positive/Negative for the detection of the following: Coxsackievirus Group A, Type A9 and A24 Coxsackievirus Group B Type B1, B2, B3, B4, B5 and B6
Reference Ranges:	Negative for the detection of Coxsackie virus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Coxsackie virus.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Swabs (Eye, throat or rectal). Use Dacron or Rayon swabs submitted in Viral Transport Media (VTM). DO NOT use calcium alginate swabs as they may inhibit viral activity.b. Stools, tissues, and CSF are submitted in sterile containers without additional media or saline added.c. Referred culture isolates held at 37 C until shipped <p>Specimens should be collected within three days of onset. Ship specimens (except referred culture isolates) within three days of collection. All specimen tubes must be labeled with at least the patient. Ship with cold packs.</p>
Rejection Criteria:	Unacceptable specimens; improperly completed requisition form; no patient identifier on specimen; broken specimen tube; specimens shipped at improper temperatures; Improperly collected specimen (e.g. dry swab or fluid added to solid specimens or CSF); specimens received greater than seven days after collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Five to 14 days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Cryptosporidium/Cyclospora/Giardia

Test Name:	Acid Fast Staining for <i>Cryptosporidium/Cyclospora</i> Direct Immunofluorescent Staining for <i>Cryptosporidium/Giardia</i>
Method Name:	Acid Fast Staining or Direct Immunofluorescent Staining with microscopic examination
Results:	Negative for <i>Cryptosporidium</i> , <i>Cyclospora</i> , and <i>Giardia</i> Positive for <i>Cryptosporidium</i> , <i>Cyclospora</i> , or <i>Giardia</i>
Reference Ranges:	Negative for <i>Cryptosporidium</i> , <i>Cyclospora</i> , and <i>Giardia</i>
Clinical Significance:	<p>Protozoans of the genus Cryptosporidium are encountered worldwide and produce a self-limiting gastroenteritis in immunocompetent individuals. In immunocompromised patients, symptoms are more severe and persistent and may result in mortality.</p> <p>Cyclospora has been shown to cause (in humans) gastroenteritis characterized by watery diarrhea and systemic symptoms such as anorexia, malaise, weight loss, and general debilitation.</p> <p>Giardiasis is the most common intestinal parasitic infection in the United States and is a common cause of diarrhea in children (especially in day care centers), travelers, and in waterborne epidemics.</p>
Submission Criteria:	<p>Samples must be submitted in Para Pack Ultra Ecofix® provided by an Illinois Department of Public Health laboratory. Stool should be placed in fixative or tested within 30 minutes of passage.</p> <p>Note: Acid fast staining is performed when <i>Cryptosporidium</i> or <i>Cyclospora</i> is requested. If <i>Cryptosporidium</i> is required on a large volume of specimens (suspected outbreak), the Immunofluorescent staining is performed.</p>
Rejection Criteria:	Specimens other than those outlined in the submission criteria section above including unpreserved stool specimens. Improperly completed Communicable Disease Test Requisition Form , specimens without submission form, and specimens with identification not matching submission form. Specimens submitted with no unique identifier.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	Three days
Shipping:	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562
Submission Form:	Communicable Disease Test Requisition Form

Dengue Virus

Test Name:	Identification of Dengue Viral (DV) Infection
Method Name:	Detection of IgM antibodies to DV using antibody capture enzyme linked immunosorbent assay (MAC-ELISA) Detection of DV antibodies by viral neutralization in culture (reflex assay for positive/equivocal MAC-ELISA assay results; performed at the CDC)
Results:	Results for ELISA screen: negative/positive/equivocal Results for Viral Neutralization: Neutralizing Antibody detected to Dengue virus/No Neutralizing Antibody
Reference Ranges:	Negative for the detection of DV antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of DV outbreaks.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i>b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection.
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30days.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Seven days for the MAC- ELISA assay Four to six weeks for viral neutralization confirmation by CDC if necessary
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Arbovirus Test Requisition Form

Eastern Equine Encephalitis Virus

Test Name:	Identification of Eastern Equine Encephalitis virus (EEEV) Infection
Method Name:	Detection of IgM antibodies to EEEV using antibody capture enzyme lined immunosorbent assay (MAC-ELISA) Detection of EEEV antibodies by viral neutralization in culture (reflex assay for positive/equivocal MAC-ELISA assay results) <i>Note: All testing performed at the CDC</i>
Results:	Results for ELISA screen: negative/positive/equivocal Results for Viral Neutralization: Neutralizing Antibody detected to Eastern Equine Encephalitis virus/No Neutralizing Antibody
Reference Ranges:	Negative for the detection of EEEV antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of EEEV outbreaks.
Submission Criteria:	Acceptable specimens include: a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i> b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection.
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30 days.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Four to six weeks for CDC to perform the assay(s).
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Arbovirus Test Requisition Form

Echovirus

Test Name:	Detection of Echovirus
Method Name:	Identification of Echovirus in culture using a Indirect Fluorescent Antibody Assay
Results:	Positive/Negative for the detection of the following: Echovirus types 4, 6, 9, 11, and 30
Reference Ranges:	Negative for the detection of Echovirus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Echovirus.
Submission Criteria:	Acceptable specimens <ol style="list-style-type: none">Swabs (Eye, throat or rectal). Use Dacron or Rayon swabs submitted in Viral Transport Media (VTM). DO NOT use calcium alginate swabs as they may inhibit viral activity.Stools, tissues, and CSF are submitted in sterile containers without additional media or saline added.Referred culture isolates held at 37 C until shipped <p>Specimens should be collected within three days of onset. Ship specimens (except referred culture isolates) within three days of collection. All specimen tubes must be labeled with at least the patient. Ship with cold packs.</p>
Rejection Criteria:	Unacceptable specimens; improperly completed requisition form; no patient identifier on specimen; broken specimen tube; specimens shipped at improper temperatures; improperly collected specimen (e.g. dry swab or fluid added to solid specimens or CSF); specimens received greater than seven days after collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Five to 14 days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Enteric Pathogens Overview

Test Name:	Enteric Pathogen Culture (includes Clinical and referred isolates)	
Method Name:	Salmonella , Shigella , Shiga Toxin Producing E. coli , <i>Staphylococcus aureus</i> , <i>Vibrio</i> , <i>Yersinia</i> , <i>Bacillus cereus</i> or <i>Clostridium perfringens</i> (includes identification, serotyping, pulsed field gel electrophoresis, and molecular Shiga toxin)	
Results:	Negative or confirmation of <i>Salmonella</i> , <i>Shigella</i> , Shiga Toxin producing <i>E. coli</i> , <i>Staphylococcus aureus</i> , <i>Vibrio</i> , <i>Yersinia</i> <i>Bacillus cereus</i> or <i>Clostridium perfringens</i>	
Reference Ranges:	Negative or confirmation of <i>Salmonella</i> , <i>Shigella</i> , Shiga Toxin producing <i>E. coli</i> , <i>Staphylococcus aureus</i> , <i>Vibrio</i> , <i>Yersinia</i> , <i>Bacillus cereus</i> or <i>Clostridium perfringens</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Discard half of Cary-Blair fluid before adding stool for <i>C. perfringens</i> . Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen.	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Authorization:	Bacillus cereus and Clostridium perfringens toxin testing require approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016. All other enteric tests are required to be submitted by Illinois Administrative Rule.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

Enterovirus, Types 70 and 71

Test Name:	Detection of Enterovirus
Method Name:	Identification of Enterovirus in culture using a Indirect Fluorescent Antibody Assay
Results:	Positive/Negative for the detection of the following: Enterovirus types 70 and 71
Reference Ranges:	Negative for the detection of Enterovirus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Enterovirus.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Swabs (Eye, throat or rectal). Use Dacron or Rayon swabs submitted in Viral Transport Media (VTM). DO NOT use calcium alginate swabs as they may inhibit viral activity.b. Stools, tissues, and CSF are submitted in sterile containers without additional media or saline added.c. Referred culture isolates held at 37 C until shipped <p>Specimens should be collected within three days of onset. Ship specimens (except referred culture isolates) within three days of collection. All specimen tubes must be labeled with at least the patient. Ship with cold packs.</p>
Rejection Criteria:	Unacceptable specimens; improperly completed requisition form; no patient identifier on specimen; broken specimen tube; specimens shipped at improper temperatures; improperly collected specimen (e.g. dry swab or fluid added to solid specimens or CSF); specimens received greater than seven days after collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Five to 14 days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Enteroviruses Overview

The Illinois Department of Public Health's Chicago laboratory offers testing to confirm infections of certain Enteroviruses by cell culture isolation and identification by direct-Fluorescent Antibody (DFA) microscopy. Enteroviruses may be detected in the following specimens:

What Enteroviruses do we test for?

1. Coxsackie Group A, Type A9 and A24
2. Coxsackie Group B, Types B1, B2, B3, B4, B5 and B6
3. Echovirus Type 4, 6, 9, 11, and 30
4. Enterovirus Type 70 and 71

What tests are performed?

1. The specimen is inoculated in cell cultures to determine if the virus is present by observing the cultures daily for cytopathic effect (CPE).
2. When CPE is greater than 25 percent of the monolayer, slides are prepared from the culture and stained with a blended group-specific monoclonal antibody to determine the virus group.
3. The slides are observed by microscopic examination to look for cells exhibiting apple-green fluorescence.
4. Once the group is identified, an additional slide is prepared to identify the virus by a type-specific monoclonal antibody.
5. Microscopic examination is required to determine which virus type reacts with a specific monoclonal antibody by exhibiting apple-green fluorescence.
6. A negative result does not rule out infection. Proper specimen collection, handling, and shipping criteria must be followed.

Acceptable Specimens

1. Eye, throat or rectal swabs in Viral Transport Media (VTM)
2. Stool
3. Tissue
4. CSF
5. Referred culture isolates.

Escherichia coli (shiga toxin producing)

Test Name:	Isolation and identification of shiga toxin-producing <i>E. coli</i>	
Methods:	Culture and biochemical reactions are used for the isolation, identification, and serotyping of <i>E. coli</i> . Real-time polymerase chain reaction assay is used for the identification of shiga toxin (types 1 and 2)- producing <i>E. coli</i> .	
Results:	Negative for the detection of Shiga toxin-producing <i>E. coli</i> .	
Reference Ranges:	Negative for the detection shiga toxin producing <i>E. coli</i> .	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

Francisella tularensis (tularemia)

Test Name:	Culture Identification of <i>F. tularensis</i> (<u>potential biothreat agent</u>)		
Method Name:	Rapid presumptive identification by real-time polymerase chain reaction (PCR) assay Confirmation by biochemical identification of culture isolate		
Results:	Negative/Positive for the identification of <i>F. tularensis</i> . <i>If the test is negative and the isolate is the genus Francisella, speciation will not be performed.</i>		
Reference Ranges:	Negative for the identification of <i>F. tularensis</i>		
Clinical Significance:	Tularemia is a rare infectious disease that can attack the skin, eyes, lymph nodes, lungs and, less often, other internal organs. It is caused by the bacterium <i>Francisella tularensis</i> which is transmitted by several routes such as insect bites and direct exposure to an infected animal. The infection is highly contagious and potentially fatal. Early confirmation of infection aids in appropriate antibiotic therapeutic intervention.		
Submission Criteria:	Request testing if you suspect an isolate may be <i>F. tularensis</i> . See asm.org for the rule-out/in protocols for <i>F. tularensis</i> . Submit an isolate on an agar slant with any media that will support growth. Do not submit the isolate on an agar plate unless the specimen is being transported by courier. Do not perform further tests. Note: <i>Francisella tularensis</i> is highly infectious when grown in culture, and laboratory-acquired infections have been documented. The isolation of <i>F. tularensis</i> from clinical specimens, especially if unanticipated, can generate concern among laboratory workers about possible exposure. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.		
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.		
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.		
Turnaround Time:	One day for presumptive PCR; Five to seven days for culture confirmation		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form		

Haemophilus influenzae

Test Name:	Identification of <i>Haemophilus influenzae</i>
Method Name:	Biochemical confirmation of <i>Haemophilus influenzae</i> Antiserum slide agglutination to identify serogroups (epidemiological purposes only)
Results:	Positive/Negative for the detection of <i>Haemophilus influenzae</i> Serogroups detected; a, b, c, d, e and f.
Reference Ranges:	Negative for <i>Haemophilus influenzae</i>
Clinical Significance:	<i>H. influenzae</i> can affect many organ systems. Type “b” can cause septicemia, meningitis, septic arthritis and purulent pericarditis. Non-“b” bacteria can cause disease similar to type “b.” Nontypeable <i>H. influenzae</i> can cause invasive disease.
Submission Criteria:	Isolate grown on a chocolate agar slant. If sent by courier, isolates grown on chocolate agar plates are also acceptable. Submissions of <i>H. influenzae</i> from sterile body sites (blood, CSF or synovial fluids) are required by the state.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	No prior authorization is required.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

Human Immunodeficiency Virus (HIV), Types 1 and 2 - Serum

Test Name:	Detection of HIV Types 1 and 2 Antibody and P24 Antigen	
Method Name:	Chemiluminescent microparticle immunoassay (CMIA) for the detection of HIV antibodies/P24 antigen	
Results:	Positive/Negative for HIV-1 antibody/P24 antigen Positive/Negative for HIV-2 antibody/P24 antigen	
	NOTE: If the test is positive, specimens will be referred for additional confirmatory testing to differentiate HIV-1 from HIV-2 and/or for direct detection of the HIV-1 RNA by the polymerase chain reaction assay.	
Reference Range:	Negative for the detection of HIV-1/HIV-2 antibodies/p24 antigen	
Clinical Significance:	Early detection of HIV in the acute phase, using the CMIA, is essential to the rapid linkage of individuals infected with HIV to care and prevention of transmission.	
Submission Criteria:	Collect 2 mL unheated serum separated and retained in the original Autosep™ vacutainer tube. Do not submit plasma. Label specimens with a unique identifier. Provide a completed HIV/STD requisition form with the specimen. Specimens must reach the laboratory within seven days of collection if shipped in cooler with ice packs	
Rejection Criteria:	Specimens will be rejected if they are: <ul style="list-style-type: none">• Grossly hemolyzed• No submission form is provided• Insufficient quantity• No unique identifier on specimen• Broken or leaking specimen• Specimen greater than seven days old from collection	
Authorization:	Prior approval from the Illinois Department of Public Health Office of Health Protection, STD Section at 217-782-2747 is necessary.	
Turnaround Time:	Two days for screening, two to three days for additional tests	
Shipping:	IDPH – Chicago Lab STI Laboratory 2121 W. Taylor St. Chicago, IL 60612	IDPH – Carbondale Lab STI Laboratory 1155 S. Oakland Ave. Carbondale, IL 62902
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Utilize the provided submission form. Do not make photocopies.	

Human Immunodeficiency Virus (HIV), Type 1 – Oral Fluid Western Blot

Test Name:	Detection of HIV Types 1 Antibody Oral Fluid Western Blot
Method Name:	OraSure® HIV-1 Western Blot
Results:	Positive/Negative/Indeterminate
Reference Range:	Negative for the detection of HIV-1/HIV-2 antibodies/p24 antigen
Clinical Significance:	Use of the oral fluid western blot HIV test allows for a supplemental test which may be used in the field in setting where phlebotomists may not be present.
Submission Criteria:	Each specimen must be accompanied with a completed submission form. Rapid test positive must be marked. Print the specimen information in the spaces provided using a pen and dark ink. Store OraSure® HIV-1 specimens at 4 C to 37 C for a maximum of 21 days from the time of collection, including the time for shipping and testing.
Rejection Criteria:	Specimens will be rejected if they are: <ul style="list-style-type: none">• No submission form is provided• No unique identifier on specimen• Specimen greater than 21 days old from collection
Authorization:	Prior approval from the Illinois Department of Public Health; Office of Health Protection, STD Section at 217-782-2747 is necessary.
Turnaround Time:	Three days
Shipping:	IDPH – Chicago Lab STI Laboratory 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	Call the Springfield laboratory at 217-782-6562 to order HIV specimen mailing kits. Kits must be ordered from the Illinois Department of Public Health at least one week in advance of the anticipated specimen collection date. The kits consist of: 1) OraSure® Collection device, 2) Vonsel 95kPa Shipping bags, 3) leak-proof shipping containers, 4) Illinois Department of Public Health Laboratory STD/HIV Test Request submission forms and 5) UPS shipping labels.
Submission Form:	Utilize the provided submission form. Do not make photocopies.

Human Influenza Virus

Test Name:	Detection of Influenza
Method Name:	Real time Reverse Transcriptase Polymerase Chain Reaction
Results:	Positive and Negative for the detection of Influenza A, subtypes H1, H3, H1N1 pdm2009, H3N2 variant, and Influenza B. Avian influenza H5N1 and H7N9 are tested only if epidemiologically consistent with infection.
Reference Ranges:	Negative for Influenza A (all subtypes) and Influenza B.
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Influenza.
Submission Criteria:	Specimens should be collected during the acute phase of illness (within three days of onset). Complete the appropriate submission form including authorization outbreak code (see Authorization section below) for each specimen. Acceptable swab specimens (submitted in viral transport medium) include nasopharyngeal, nasal, throat, and dual nasopharyngeal/throat. Acceptable non-swab specimens include Nasal aspirates, nasal washes, Bronchoalveolar lavages, tracheal aspirates, bronchial washes, sputum, lung tissue and viral cultures. Click here for further instructions . Store and ship specimens at 4 C. Specimens must be received at the Illinois Department of Public Health laboratory within 72 hours of collection. The 72 hours limitation may be waived if specimens have been immediately frozen following collection and shipped on dry ice (contact the Illinois Department of Public Health laboratory for further information concerning freezing and shipping of frozen influenza specimens).
Rejection Criteria:	Specimens other than those outlined in the submission criteria section above; improperly completed Respiratory Viral submission form; specimens without submission form; submission form/specimen tube mismatches; no patient identifier on specimen; broken specimen tube; specimens sent as dry swabs (no VTM); specimens shipped at improper temperatures.
Authorization:	Individual specimen authorization is not needed for sentinel sites. All others submissions need approval from your local health department. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016. Local health departments may complete the online submission form at this link .
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab IDPH-Springfield Lab IDPH – Carbondale Lab Virology Laboratory Molecular Lab Molecular Lab 2121 W. Taylor St. 825 N. Rutledge St. 1155 S. Oakland Ave. Chicago, IL 60612 Springfield, IL 62702 Carbondale, IL 62902
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Complete the provided submission form. Do not photocopy.

Lead, Pediatric Blood

Test Name:	Quantification of blood levels in pediatric blood
Method Name:	Inductively coupled plasma mass spectrometry (ICP-MS)
Results:	Lead measurements are reported as microgram/deciliter blood ($\mu\text{g}/\text{dL}$). Detection level is 1 $\mu\text{g}/\text{dL}$. Lead levels > 5 $\mu\text{g}/\text{dL}$ indicate lead exposure. For more information concerning lead exposure, visit http://www.idph.state.il.us/illinoislead/index.htm
Clinical Significance:	Early detection of lead poisoning allows for the effective clinical management of patients. Complications of lead poisoning include learning Disabilities, impaired growth, impaired hearing, IQ decline, mental retardation and death.
Submission Criteria:	Micro Specimens: For capillary specimens, fill micro-tube to at least above the first line marked on the tube. 100ul (microliter) of whole blood is required. Macro Specimens: Submit a minimum of 1mL (milliliter) of whole blood drawn into a trace metal free vacuotainer containing either EDTA or Heparin anticoagulant. Mix both capillary and venous specimens by gentle inversion five to 10 times. For specific instructions regarding specimen collection, refer to the specimen collection booklet provided by the Illinois Department of Public Health's Blood Lead Program (217-782-0403). The specimen must be labeled with the patient's full name and date of birth. For capillary specimens, use a black permanent marker. Place each specimen into an individual small plastic bag. Blood lead specimens should reach the Springfield laboratory within 15 days of collection. For more information see the following for specimen collection .
Rejection Criteria:	Insufficient volume of blood: clotted blood; specimens collected in wrong container (e.g. Serum Tubes); no patient identifier on specimen; requisition form not submitted; patient identifier on specimen and requisition form do not match; leaking specimen,
Authorization:	Prior approval through the local health department is required.
Turnaround Time:	Three days
Shipping:	IDPH – Springfield Laboratory Lead Laboratory 825 N. Rutledge St. Springfield, Ill. 62794
Shipping Kits:	Call the Springfield laboratory at 217-782-6562
Submission Form:	Blood lead testing forms may be obtained by calling the Springfield laboratory. Please do not photocopy forms.

Legionella pneumophila

Test Name:	Identification of <i>Legionella pneumophila</i>
Method Name:	Identification of <i>Legionella pneumophila</i> by immune-fluorescence microscopy, and polymerase chain reaction (tests performed by the CDC) Serotypes identified by antibody slide agglutination (test performed by the CDC for epidemiological purposes only)
Results:	Positive/Negative for the detection of <i>L. pneumophila</i>
Reference Ranges:	Negative for the detection of <i>L. pneumophila</i>
Clinical Significance:	<i>L. pneumophila</i> is the etiological agent for Legionnaires' disease, a febrile and pneumonic illness with numerous clinical presentations.
Submission Criteria:	Pure isolate grown on a Buffered Charcoal Yeast Extract agar slant. Hospitals are required to submit known <i>L. pneumophila</i> isolates to the Illinois Department of Public Health laboratories for confirmatory identification and serotyping by the CDC.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	Approximately four weeks
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

Novel Coronavirus (MERS-CoV), Molecular

Test Name:	Identification of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) or NCV-2012
Method Name:	Reverse Transcriptase -Polymerase Chain Reaction (PCR) for MERS-CoV
Results:	Negative /Presumptive Positive/Equivocal for the identification of MERS-CoV
Reference Ranges:	Negative for the identification of MERS-CoV
Clinical Significance:	Human infection with MERS-CoV can produce symptoms from mild to severe; these symptoms include severe acute respiratory illness with fever, cough and shortness of breath. Some patients also have shown gastrointestinal distress and/or renal failure. No cases have been confirmed in the USA, but this virus has a potential to spread to the US and poses a public health risk. The virus can be transmitted from person-to-person, and has high levels of both morbidity and mortality (almost 50%). Testing by EUA (Emergency Use Authorizatrion) was approved by the Secretary of Health and Human Services on May 30, 2013.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Nasopharyngeal or Oropharyngeal Swabsb. Sputumc. Lower Respiratory Tract aspirates/washesd. Serum
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Two days
Shipping:	IDPH – Chicago Lab Molecular Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Measles Virus (rubeola)

Test Name:	Detection of Measles virus (Rubeola)
Method Name:	Real-time reverse transcriptase polymerase chain reaction Shipment of sera specimens to CDC is also available.
Results:	Negative and Positive for the detection of Measles RNA
Reference Ranges:	Negative for Measles
Clinical Significance:	<p>Measles virus is a member of the family Paramyxoviridae, genus Morbillivirus. Clinical infection with measles virus is characterized by high fever, cough, coryza, conjunctivitis, malaise, Koplik's spots inside the mouth and rash developing behind the ears and over the forehead, spreading to the trunk.</p> <p>Measles is highly contagious with an incubation period of four to 12 days. Infected individuals are contagious from the first appearance of symptoms until 3-5 days after the rash appears.</p>
Submission Criteria:	Preferred specimens are nasopharyngeal washes transported in viral transport medium. Throat or nasopharyngeal swabs in viral transport medium are also acceptable. Swabs must be submitted cold and be shipped overnight delivery. For additional information on specimen submission please click here .
Rejection Criteria:	Unacceptable specimens include those with mismatched requisitions, specimens without patient identifiers, any non-respiratory specimens, and any specimens not shipped cold.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three days
Shipping:	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Communicable Disease Test Requisition Form

Human Metapneumovirus, Molecular Screen

Test Name:	Detection of Human Metapneumovirus
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of Human Metapneumovirus
Reference Ranges:	Negative for the detection of Human Metapneumovirus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within seven days of collection on cold packs (4 C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form Note indicate on the bottom of the form that you are requesting the Respiratory Viral Panel assay along with the outbreak number.

Mumps virus

Test Name:	Detection of mumps virus
Method Name:	Real-time reverse transcriptase polymerase chain reaction
Results:	Negative and Positive for the detection of mumps RNA
Reference Ranges:	Negative for mumps
Clinical Significance:	<p>Mumps virus is a member of the family Paramyxoviridae, genus Rubularvirus. Clinical infection with mumps virus is characterized by parotitis with complications such as meningitis, pancreatitis and orchitis. Although the majority of infections are benign, more serious but rare consequences of infection include encephalitis, cerebellar ataxia, and hearing loss.</p> <p>Mumps is highly contagious with an incubation period of 16-18 days, but can range from 12-25 days. Infected individuals are contagious from a few days before until five days after the onset of parotitis.</p>
Submission Criteria:	Specimens for mumps testing are swab specimens collected from the buccal cavity and placed in a protective sheath. Swabs must be submitted cold, shipped overnight delivery and must be received by five days after collection. For additional information on Mumps submission please click here .
Rejection Criteria:	Unacceptable specimens include those with mismatched requisitions, specimens without patient identifiers, any non-respiratory specimens, any specimens not shipped cold, and specimens received more than five days after collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three days
Shipping:	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Communicable Disease Test Requisition Form

***Mycobacterium tuberculosis*, Acid Fast Bacilli (AFB) Smear Analysis**

Test Name: Detection of acid fast bacilli (AFB) in primary clinical specimens

Method Name: AFB detected by Auramine-Rhodamine stain and fluorescent microscopy

Results:

# AFB Detected	Result Reported
0 AFB per slide	Negative
1-3 AFB per slide	Equivocal; report number detected in the comment section along with a request for the provider to send another specimen.
3-9 AFB per slide	Rare
>10 AFB per slide	Few
>1 AFB per field	Many

Reference Ranges: Negative for the detection of *AFB*.

Clinical Significance: AFB may signify *M. tuberculosis* infection. Test does not distinguish from *M. tuberculosis* versus non-tuberculous AFB. Test does not distinguish between live versus dead infection.

Submission Criteria: [Click here for acceptable specimens; collection and shipping instructions.](#)

Rejection Criteria: Specimens other than those detailed above; improperly filled out [Communicable Disease Test Requisition Form](#); no patient identifier on specimen; broken specimen tube; specimen received greater than 10 days after collection.

Authorization: Local health departments are authorized to submit specimens. Other private submitters will require local health department approval to submit specimens.

Turnaround Time: 24 hours

Shipping: IDPH - Chicago Lab
Mycobacteriology Laboratory
2121 W. Taylor St.
Chicago, IL 60612

Shipping Kits: Call the Chicago laboratory at 312-793-4760.

Submission Form: [Communicable Disease Test Requisition Form](#)

***Mycobacterium tuberculosis*, Nucleic Acid Amplification Test (NAAT)**

Test Name:	Direct detection of the <i>M. tuberculosis</i> complex in primary clinical specimens
Method Name:	Detection by real-time polymerase chain reaction (PCR) assay
Results:	Positive/Negative for the detection of <i>the M. tuberculosis</i> complex
Reference Ranges:	Negative for the detection of the <i>M. tuberculosis</i> complex.
Clinical Significance:	Direct detection of the <i>M. tuberculosis</i> complex provides early presumptive evidence of infection; allows for early therapeutic intervention and patient isolation. The test does not distinguish among the members of the <i>M. tuberculosis</i> complex (<i>M. tuberculosis</i> , <i>M. bovis</i> , <i>M bovis</i> BCG, <i>M. canettii</i> , <i>M. africanum</i> , <i>M. caprae</i> , <i>M. microti</i> , <i>M. pinnipedii</i>). Test does not distinguish between live versus dead infection.
Submission Criteria:	Click here for acceptable specimens; collection and shipping instructions.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.
Authorization:	Local health departments are authorized to submit specimens. Other private submitters will require local health department approval to submit specimens.
Turnaround Time:	24 hours
Shipping:	IDPH – Chicago Lab Mycobacteriology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	Call the Chicago laboratory at 312-793-4760.
Submission Form:	Communicable Disease Test Requisition Form

***Mycobacterium tuberculosis*, Culture confirmation**

Test Name:	Culture confirmation of <i>M. tuberculosis</i> complex infection.
Method Name:	Confirmation of AFB in culture by Kinyon Stain Identification of <i>M. tuberculosis</i> complex in culture by real-time polymerase chain reaction (PCR) assay
Results:	Positive/Negative for the detection of <i>the M. tuberculosis</i> complex
Reference Ranges:	Negative for the detection of the <i>M. tuberculosis</i> complex.
Clinical Significance:	Culture identification provides confirmation of infection with the <i>M. tuberculosis</i> complex and confirms detection in primary sputum by NAAT. The test does not distinguish among the members of the <i>M. tuberculosis</i> complex (<i>M. tuberculosis</i> , <i>M. bovis</i> , <i>M bovis</i> BCG, <i>M. canettii</i> , <i>M. africanum</i> , <i>M. caprae</i> , <i>M. microti</i> , <i>M. pinnipedii</i>). The laboratory does not identify non-tuberculous Mycobacterium cultures.
Submission Criteria:	Click here for acceptable specimens; collection and shipping instructions. Mycobacterium isolates. Submit on agar slant tubes; (see shipping instructions)
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube; primary specimen received greater than 10 days after collection.
Authorization:	local health departments are authorized to submit specimens. Other private submitters will require local health department approval to submit specimens.
Turnaround Time:	Variable – dependent upon culture growth rate
Shipping:	IDPH – Chicago Lab Mycobacteriology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	Call the Chicago laboratory at 312-793-4760.
Submission Form:	Communicable Disease Test Requisition Form

***Mycobacterium tuberculosis*, Drug Susceptibility in Culture**

Test Name:	Identification of first line drug susceptible/resistant isolates of the <i>M. tuberculosis</i> complex in culture.
Method Name:	Growth of the <i>M. tuberculosis</i> complex in MGIT cultures supplemented with the following first line drugs: Rifampin; tested at a concentration of 1 µg/ml Isoniazid (INH); tested at concentrations of 0.1 µg/ml and 0.4 µg/ml Ethambutol; tested at a concentration of 5.0 µg/ml Pyrazinamide (PZA); tested at a concentration of 100 µg/ml <i>Note: Second line drugs not tested</i>
Results:	Drug Susceptible/resistant
Reference Ranges:	Susceptible for all drugs tested.
Clinical Significance:	<p>The efficacy of drug therapy in the treatment of <i>M. tuberculosis</i> complex disease can be compromised by the infection with or development of a drug-resistant TB strain. It is vitally important to understand when a patient is infected with a drug-resistant strain so therapy can be changed to limit the spread of the infection and to improve clinical outcome.</p> <p>The Illinois Department of Public Health laboratory performs the drug susceptibility assay on all new TB isolates. Thereafter, the test is only performed for patients that are not responding to therapy (although they are adhering to their drug regimen) AND it has been more than 60 days since the original or previous drug susceptibility test was performed for the patient.</p>
Submission Criteria:	<ol style="list-style-type: none">1. Click here for acceptable specimens; collection and shipping instructions.2. <i>Mycobacterium tuberculosis</i> complex isolates. Submit on agar slant tubes; (see shipping instructions)
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.
Authorization:	Local health departments are authorized to submit specimens. Other private submitters will require local health department approval to submit specimens.
Turnaround Time:	Seven to 10 days after the identification of culture isolate as <i>M. tuberculosis</i> complex
Shipping:	IDPH – Chicago Lab Mycobacteriology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	Call the Chicago laboratory at 312-793-4760.
Submission Form:	Communicable Disease Test Requisition Form

***Mycobacterium tuberculosis* Strain Genotyping**

Test Name:	Identification of Mycobacterium tuberculosis strain by genotyping
Method Name:	Molecular based assays performed by the Michigan Department of Community Health
Results:	Strain identification reported to the state for epidemiological investigations. Submitters are not forwarded the results.
Reference Ranges:	Not applicable.
Clinical Significance:	Strain typing allows for epidemiological studies to be performed to identify infection clusters, routes or transmission, and outbreaks of M. tuberculosis.
Submission Criteria:	All facilities are obligated by law to forward M. tuberculosis isolates to the state Mycobacteriology laboratory for genotyping. Submit the isolates on a agar slant tube (see shipping instructions).
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.
Authorization:	Local health departments are authorized to submit specimens. Other private submitters will require local health department approval to submit specimens.
Turnaround Time:	NA
Shipping:	IDPH – Chicago Lab Mycobacteriology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	Call the Chicago laboratory at 312-793-4760.
Submission Form:	Communicable Disease Test Requisition Form

***Neisseria gonorrhoeae* Culture**

Test Name:	Identification of <i>Neisseria gonorrhoeae</i>
Method Name:	Biochemical confirmation of <i>Neisseria gonorrhoeae</i>
Results:	Positive/Negative for the detection of <i>Neisseria gonorrhoeae</i>
Reference Ranges:	Negative for <i>Neisseria gonorrhoeae</i>
Clinical Significance:	<i>N. gonorrhoeae</i> is always considered a pathogen when isolated from human sources. It is sexually transmitted and can be isolated from genital, rectal and throat specimens. The organism is capable of dissemination and has been isolated from blood and joint fluid.
Submission Criteria:	Isolate grown on a chocolate agar slant. If sent by courier, isolates grown on chocolate agar plates are also acceptable.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	Submission of specimens for <i>N. gonorrhoeae</i> testing requires authorization from the Illinois Department of Public Health Office of Health Protection, STD Section. The STD Section can be reached at 217-782-2747.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

Neisseria meningitidis

Test Name:	Identification of <i>Neisseria meningitidis</i>
Method Name:	Biochemical confirmation of <i>Neisseria meningitidis</i> Antiserum slide agglutination to identify serogroups (epidemiological purposes only)
Results:	Positive/Negative for the detection of <i>Neisseria meningitidis</i> Serogroups detected; A, B, C, D, W135, X, Y, and Z
Reference Ranges:	Negative for <i>Neisseria meningitidis</i>
Clinical Significance:	<i>N. meningitidis</i> infection in ordinarily sterile site (such as spinal fluid and blood) is highly pathogenic and life threatening.
Submission Criteria:	Isolate grown on a chocolate agar slant. If sent by courier, isolates grown on chocolate agar plates are also acceptable. Hospitals are required to submit known <i>Neisseria meningitidis</i> isolates to the Illinois Department of Public Health laboratories for confirmatory identification and serogrouping.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	No prior authorization is required.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

Newborn Screening

Test Panel:

Please see the following links for a detailed description of testing in the Newborn Screening section. Information about the Newborn Screening program is available [here](#).

Endocrine Disorders

- Congenital adrenal hyperplasia (CAH)
- Congenital hypothyroidism

Hemoglobinopathies

- Sickle cell disease and other sickling hemoglobinopathies
- Apha and ² eta thalassemia

Metabolic Disorders

- Biotinidase deficiency
- Cystic fibrosis (CF)
- Galactosemia

Amino acid disorders

- Phenylketonuria (PKU) / Hyperphenylalaninemia
- Maple syrup urine disease (MSUD)
- Tyrosinemia, type 1 and possibly type 2 or type 3 - tyrosine levels may not be sufficiently elevated for detection
- Homocystinuria / Hypermethioninemia
- 5-oxoprolinuria (glutathione synthetase deficiency) - may not be reliably detected in first days of life

Urea cycle disorders

- Citrullinemia (argininosuccinate synthetase deficiency)
- Argininosuccinic aciduria (argininosuccinate lyase deficiency)
- Argininemia - extremely rare

Organic acid disorders

- 2-methylbutyryl-CoA dehydrogenase deficiency (2MBD)
- 3-methylcrotonyl-CoA carboxylase deficiency (3MCC)
- 3-hydroxy-3-methylglutaric-CoA lyase deficiency (3HMG)
- 3-methylglutaconic aciduria (3MGA)
- Glutaric aciduria, type 1 (GA1)
- Propionic acidemia (PA)
- Isovaleric acidemia (IVA)
- Methylmalonic acidemia (MMA)
- Malonic aciduria (MA) - may not be reliably detected in first days of life
- Beta-ketothiolase deficiency (BKT)
- Multiple carboxylase deficiency (MCD)

Fatty acid oxidation disorders

- Short chain acyl-CoA dehydrogenase deficiency (SCAD)
- Medium/Short chain L-3-hydroxyacyl-CoA-dehydrogenase deficiency (M/SCHAD)
- Isobutyryl-CoA dehydrogenase deficiency (IBCD)

Medium chain acyl-CoA dehydrogenase deficiency (MCAD)
Long chain 3-hydroxyacyl-CoA dehydrogenase deficiency (LCHAD)
Very long chain acyl-CoA dehydrogenase deficiency (VLCAD)
Trifunctional protein deficiency (TFPD)
Carnitine palmitoyl transferase deficiency type 2 (CPT2) - neonatal form, extremely rare
Carnitine palmitoyl transferase deficiency type 1 (CPT1A) - may not be reliably detected in first days of life
Carnitine/acylcarnitine translocase deficiency (CACT) - neonatal form, extremely rare
Carnitine uptake defect (CUD) - may not be reliably detected in first days of life
Multiple acyl-CoA dehydrogenase deficiency (MADD) / Glutaric aciduria, type 2 (GA2)

Severe Combined Immunodeficiency (SCID) (Statewide screening of newborns for SCID is scheduled to begin in 2014.)

Lysosomal Storage Diseases (Statewide screening of newborns for lysosomal storage disorders is scheduled to begin in 2014.)

Fabry Disease
Gaucher Disease
Pompe Disease
Krabbe Disease
Niemann Pick Disease
Hurler's Disease (MPS-I)

Unsatisfactory Specimens Unsatisfactory specimen reports indicate the specimen was improperly collected, handled or submitted, as determined by the Illinois Department of Public Health's Division of Laboratories. Specimens must be of good quality to assure reliable, valid newborn screening; unsatisfactory specimens require collection and submission of a new sample to assure that every baby receives a valid newborn screening. Unsatisfactory results are reported from the program by a letter indicating the nature of the specimen and the need for immediate repeat specimen collection. The letter is sent by mail to the submitting physician or facility.

Turnaround Time: A complete description of turnaround time is available [here](#). Positive or abnormal results are provided as quickly as possible.

Authorization: This testing is authorized and required by Illinois Administrative Rule.

Shipping: IDPH – Chicago Lab
Newborn Screening Laboratory
2121 W. Taylor St.
Chicago, IL 60612

Shipping Kits: Call 217-782-6562. Special courier service shipping labels are available to birthing hospitals. Call for more information about this service 217-785-8101.

Submission Form:

The submission form for Newborn Screening is specific to this program. The submission form/ collection device is available by calling the Springfield laboratory at 217-782-6562.

Norovirus (Norwalk-like virus, NLV)

Test Name:	Detection of Norovirus		
Method Name:	Molecular detection (RT-PCR) of Norovirus Types G1 & G2		
Results:	Norovirus types G1 & G2 Detected or Not Detected		
Reference Range:	Norovirus Not Detected.		
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Norovirus .		
Submission Criteria:	Collected stool specimens should be stored refrigerated after collection. Ship stool specimens to the laboratory with ice packs. All specimens must be labeled with a unique identifier. Refer to the following link for further collection and submission information. Patient Instructions for Stool Collection .		
Rejection Criteria:	Specimens other stool. Improperly filled out Requisition form. No patient identifier on specimen. Broken or leaking specimen. Specimens shipped at improper temperatures. Specimen received greater than seven days from collection.		
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.		
Turnaround Time:	Three days		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Shipping Kits:	Call the Springfield laboratory at 217-782-6562		
Submission Form:	Communicable Disease Test Requisition Form		

Orthopoxvirus Screen, Molecular

Test Name:	Screening assay to detect the following Orthopoxviruses: <i>Variola</i> , <i>Vaccinia</i> , cowpox, monkeypox, camelpox, ectromelia, and gerbilpox		
Method Name:	Real time polymerase chain reaction assay		
Results:	Positive/Negative for the detection of Orthopoxvirus. Assay does not distinguish among the viruses.		
Reference Ranges:	Negative for the detection of Orthopoxvirus		
Clinical Significance:	This test is intended for patients that present with a vesicular/pustular rash illness of unknown origin with a low to moderate risk of having contracted <i>Variola</i> virus (Smallpox). If the test result is positive, further appropriate reflex testing would need to be done to identify the specific orthopoxvirus contracted.		
Submission Criteria:	Evaluation of patients for potential Orthopox infection/testing is based on the Acute, Generalized Vesicular or Pustular Rash Illness Protocol . Acceptable specimens include: <ol style="list-style-type: none">Skin or crust from roof of vesicle or pustuleDried vesicular fluid on a slide (touch prep)Dry or wet swab (Dacron or rayon) of lesion pustular fluidPunch biopsy (no formalin)Ocular impressions or swabs (if conjunctivitis is present)SerumTissue culture material demonstrating cytopathic effect (only if non-variola is suspected) All specimen tubes must be labeled with at least the patient name. Ship the specimens as soon as possible after collection. Store the specimens in a refrigerator or freezer if shipping is delayed. Punch biopsy and tissue culture specimens must be shipped on ice. Other specimen types can be shipped at ambient temperature.		
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.		
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.		
Turnaround Time:	One to two days		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form		

Parainfluenza Virus, types 1, 2 and 3, Molecular Screen

Test Name:	Detection of Parainfluenza virus
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of Parainfluenza virus, types 1, 2 and 3
Reference Ranges:	Negative for the detection of Parainfluenza virus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within seven days of collection on cold packs (4 C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form Note indicate on the bottom of the form that you are requesting the Respiratory Viral Panel assay along with the outbreak number.

Parainfluenza Virus, Type 4

Test Name:	Detection of Parainfluenza virus, type 4
Method Name:	Identification of Parainfluenza virus type 4 in culture using a Indirect Fluorescent Antibody Assay
Results:	Positive/Negative for the detection of Parainfluenza virus, type 4
Reference Ranges:	Negative for the detection of Parainfluenza virus, type 4
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of Parainfluenza virus.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Nasopharyngeal swabs in viral transport medium; Nasal wash; nasal aspirate; endotracheal aspirate; bronchoalveolar lavage; lung tissueb. Referred culture isolates held at 37 C until shipped <p>Specimens should be collected within three days of onset. Ship specimens (except referred culture isolates) within three days of collection. All specimen tubes must be labeled with at least the patient name. Ship with cold packs.</p>
Rejection Criteria:	Unacceptable specimens; improperly completed requisition form; no patient identifier on specimen; broken specimen tube; specimens shipped at improper temperatures; improperly collected specimen (e.g. dry swab or fluid added to tissue, aspirates or lavages); specimens received greater than seven days after collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Five to 14 days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Plasmodium spp. (Malaria)

Test Name:	Detection of <i>Plasmodium spp.</i> (Malaria)
Method Name:	Giemsa Staining for <i>Plasmodium sp.</i> Polymerase Chain Reaction (PCR) for <i>Plasmodium spp.</i>
Results:	Negative/Positive for <i>Plasmodium falciparum</i> , <i>Plasmodium vivax</i> , <i>Plasmodium malariae</i> or <i>Plasmodium ovale</i> .
Reference Ranges:	Negative for <i>Plasmodium sp.</i>
Clinical Significance:	<p>Malaria is a major tropical disease caused primarily by four species of the protozoa <i>Plasmodium</i>: <i>Plasmodium falciparum</i>, <i>Plasmodium vivax</i>, <i>Plasmodium malariae</i>, and <i>Plasmodium ovale</i>. Malaria infects approximately 500 million people and causes 1.5 to 2.7 million deaths annually. Ninety percent of the deaths occur in sub-Saharan Africa and most of these occur in children younger than 5 years old; it is the leading cause of mortality in this age group. This disease is also widespread in Central and South America, Hispaniola, the Indian subcontinent, the Middle East, Oceania, and Southeast Asia. In the United States, individuals at risk include travelers to and visitors from endemic areas.</p> <p>Microscopy of Giemsa-stained thick and thin blood films is the standard laboratory method for diagnosis and speciation of malaria parasites.</p> <p>PCR is an alternative method of malaria diagnosis that allows for sensitive and specific detection of <i>Plasmodium</i> species DNA from peripheral blood. PCR may be more sensitive than conventional microscopy in very low parasitemias, and is more specific for species identification.</p>
Submission Criteria:	Submit stained thick and thin air-dried blood smears and a purple-capped (EDTA) blood tube. Complete patient demographics (patient's first and last name, date of birth, ethnicity, date of onset, travel history-country and dates).
Rejection Criteria:	Specimen received without Communicable Disease Test Requisition Form . Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimens not submitted according to submission criteria.
Authorization:	All hospitals are required to send positive blood films and a purple-capped (EDTA) blood tube to the Illinois Department of Public Health's Springfield laboratory for confirmation of malaria.
Turnaround Time:	Two days
Shipping:	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Communicable Disease Test Requisition Form

Rabies Virus (animal)

Test Name:	Detection of Rabies virus in animals		
Method Name:	Direct fluorescent antibody (DFA) test for the detection of rabies virus proteins in animal tissues.		
Results:	Positive, Negative, and Inconclusive for the detection of rabies virus.		
Clinical Significance:	Early detection allows for rapid post exposure treatment of exposed individuals. Since clinical rabies is most often fatal, rapid treatment can be life saving. See the Illinois Department of Public Health's Communicable Disease website for more information here .		
Submission Criteria:	Submit whole animals for specimens weighing less than 2 pounds (i.e., bat, mouse). Submit only the head if the animal weighs 2-20 pounds (i.e., dog, cat, raccoon). Submit only the brain of large animals weighing over 20 pounds (i.e., cow, horse). Brain tissue must be undamaged, allowing proper identification of specific brain sections. The specimen should be submitted immediately after collection and shipped on ice.		
Rejection Criteria:	Non-mammalian species. Specimens with damaged or decomposed tissue that cannot be identified. Use of preservative other than refrigeration. Specimens received without all required brain sections		
Authorization:	Rabies specimens must be submitted through the local Animal Control, local health department, or a veterinarian.		
Turnaround Time:	Two days		
Shipping:	IDPH – Chicago Lab Rabies Laboratory 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	http://www.idph.state.il.us/about/laboratories/RabiesSubmissionForm.pdf		

Respiratory Syncytial Virus (RSV), Molecular Screen

Test Name:	Detection of Respiratory Syncytial Virus
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of Respiratory Syncytial, types A and B
Reference Ranges:	Negative for the detection of Respiratory Syncytial Virus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within seven days of collection on cold packs (4 C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form Note indicate on the bottom of the form that you are requesting the Respiratory Viral Panel assay along with the outbreak number.

Respiratory Virus Panel, Molecular Screen

Test Name:	Detection of Respiratory Viral Pathogens
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of the following respiratory pathogens: Influenza A (types H1; H3; pdm 2009 H1N1) Influenza B Respiratory Syncytial Virus (RSV; types A and B) Human Metapneumovirus Human Rhinovirus; Adenovirus (types B/E and C) Parainfluenza virus (types 1, 2 and 3)
Reference Ranges:	Negative for all viral pathogens detected
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within 7 (seven) days of collection on cold packs (4 C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Human Rhinovirus, Molecular Screen

Test Name:	Detection of Human Rhinovirus
Method Name:	Nucleic acid amplification; microarray polymerase chain reaction assay.
Results:	Positive/negative for the detection of Human Rhinovirus
Reference Ranges:	Negative for the detection of Human Rhinovirus
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of respiratory virus pathogens.
Submission Criteria:	Nasopharyngeal swabs only (Dacron and rayon swabs are acceptable, but not calcium alginate swabs as they may inhibit respiratory viruses). Swabs must be in viral transport media (VTM), shipped within seven days of collection on cold packs (4 C). All specimen tubes must be labeled with at least the patient name.
Rejection Criteria:	Specimens other than Nasopharyngeal swabs; improperly completed requisition form, no patient identifier on specimen, broken specimen, specimens shipped at improper temperatures, dry swabs, and specimen received greater than seven days from collection.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form Note indicate on the bottom of the form that you are requesting the Respiratory Viral Panel assay along with the outbreak number.

Saint Louis Encephalitis Virus

Test Name:	Identification of Saint Louis Encephalitis Viral (SLEV) Infection
Method Name:	The Microsphere Immunofluorescence (MIA) assay Detection of SLEV antibodies by viral neutralization in culture (reflex assay for positive and equivocal MIA results)
Results:	Results for MIA screen: Detected/Not Detected/Indeterminant Results for Viral Neutralization: Neutralizing Antibody detected to St. Louis Encephalitis Virus/No Neutralizing Antibody Detected/Evidence of Flavivirus Infection
Reference Ranges:	Negative for the detection of SLEV antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of SLEV outbreaks.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i>b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30 days.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Seven days for the MAC- ELISA assay 14 days for viral neutralization confirmation if necessary
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Arbovirus Test Requisition Form

Salmonella spp.

Test Name:	Isolation and identification of <i>Salmonella spp.</i>	
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>Salmonella spp.</i> Isolates are further analyzed to identify serotypes/strains for epidemiological purposes.	
Results:	Positive/Negative for the detection of <i>Salmonella spp.</i>	
Reference Ranges:	Negative for the detection <i>Salmonella spp.</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Turnaround Time:	Five days	
Authorization:	Submission of referred isolates is required by Illinois Administrative Rule. Authorization is not required. Clinical specimens should be discussed with a local health department.	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

Shigella spp.

Test Name:	Isolation and identification of <i>Shigella spp.</i>	
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>Shigella spp.</i> Isolates are further analyzed to identify serotypes/strains for epidemiological purposes.	
Results:	Positive/Negative for the detection of <i>Shigella spp.</i>	
Reference Ranges:	Negative for the detection <i>Shigella spp.</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

***Staphylococcus aureus* (VISA/VRSA)**

Test Name:	Identification of Vancomycin Intermediate-resistant <i>Staphylococcus aureus</i> (VISA) Identification of Vancomycin Resistant <i>Staphylococcus aureus</i> (VRSA)
Method Name:	Identification of the Minimum Inhibitory Concentration (MIC) of vancomycin that suppresses growth of <i>S. aureus</i> in culture.
Results:	MIC of ≤ 2 ug/ml vancomycin- Susceptible MIC of 4-8 ug/ml vancomycin - Intermediate resistance (VISA) MIC of ≥ 16 ug/ml vancomycin- Fully resistant (VRSA)
Reference Ranges:	Vancomycin susceptible (VSSA)
Clinical Significance:	VISA/VRSA infections do not respond to vancomycin therapy requiring alternative antibiotic treatment.
Submission Criteria:	Isolate grown on a Trypticase Soy Agar (TSA) slant. If sent by courier, isolates grown on TSA agar plates are also acceptable. Hospitals are required to submit all VISA/VRSA isolates to the Illinois Department of Public Health.
Rejection Criteria:	Improperly filled out Requisition form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	Submission of referred VISA/VRSA isolates is required by Illinois Administrative Rule. Authorization is not required.
Turnaround Time:	Three to five days
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612 312-793-4747
Shipping Kits:	N/A
Submission Form:	Communicable Disease Test Requisition Form

***Staphylococcus aureus* (Enteric infection)**

Test Name:	Isolation and identification of <i>Staphylococcus aureus</i>	
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>Staphylococcus aureus</i> .	
Results:	Positive/Negative for the detection of <i>Staphylococcus aureus</i> .	
Reference Ranges:	Negative for the detection <i>Staphylococcus aureus</i> .	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016. Specimens are referred to the Wisconsin State Hygiene Laboratory in Madison or CDC.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

***Treponema pallidum* (Syphilis)**

Test Name:	Detection of <i>Treponema pallidum</i> (Syphilis) antibodies								
Method Name:	Immunoassays for the detection of treponemal and non-treponemal antibodies to syphilis.								
Results:	Positive, Negative, and Equivocal for the detection of syphilis.								
Reference Range:	Negative for Syphilis.								
Clinical Significance:	Early detection of syphilis , using the EIA as a screening test, allows for rapid treatment and limits further spread of the disease. Additional information about the stage of syphilis infection can be gleaned from the RPR and FTA tests. Left untreated, syphilis can cause devastating systemic problems and increased risk for co-infection with HIV.								
Submission Criteria:	Collect a minimum of 5 mL of whole blood. Allow blood to clot at room temperature. Centrifuge for 10 minutes. Label specimens with a unique identifier. Provide a completed HIV/STD requisition form with the specimen. Refer to the following link for further collection and submission criteria. Instructions for Syphilis Specimen Submission . Specimens must reach the lab within five days if left on-clot or 10 days if centrifuged and removed from the clot.								
Rejection Criteria:	Grossly hemolyzed specimens. No submission form. Insufficient quantity. No unique identifier on specimen. Broken or leaking specimen. Specimen greater than five days old from collection if left on-clot. Specimen greater than 10 days old from collection if off-clot.								
Authorization:	Providers are authorized by the Illinois Department of Public Health; Office of Health Protection; STD Section at 217-782-2747. A provider number will be given which should be included on the submission form.								
Turnaround Time:	Two for EIA screening, three to five days for additional tests								
Shipping:	<table><tr><td>IDPH – Chicago Lab</td><td>IDPH – Carbondale Lab</td></tr><tr><td>STI Laboratory</td><td>STI Laboratory</td></tr><tr><td>2121 W. Taylor St.</td><td>1155 S. Oakland Ave.</td></tr><tr><td>Chicago, IL 60612</td><td>Carbondale, IL 62902</td></tr></table>	IDPH – Chicago Lab	IDPH – Carbondale Lab	STI Laboratory	STI Laboratory	2121 W. Taylor St.	1155 S. Oakland Ave.	Chicago, IL 60612	Carbondale, IL 62902
IDPH – Chicago Lab	IDPH – Carbondale Lab								
STI Laboratory	STI Laboratory								
2121 W. Taylor St.	1155 S. Oakland Ave.								
Chicago, IL 60612	Carbondale, IL 62902								
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.								
Submission Form:	Submission forms are provided by the Springfield laboratory. Please do not photocopy forms.								

Varicella-zoster Virus (chicken pox), Molecular

Test Name:	Detection of Varicella-zoster Virus (VZV)		
Method Name:	Real time polymerase chain reaction		
Results:	Positive and Negative for the detection of VZV DNA		
Reference Ranges:	Negative for the detection of VZV DNA		
Clinical Significance:	This test is intended for patients that present with a vesicular/pustular rash illness of unknown of origin with a low to moderate risk of having contracted <i>Variola</i> virus (Smallpox). Depending on the clinical presentation, this test can be useful if the orthopoxvirus screening assay is negative.		
Submission Criteria:	Evaluation of patients for potential Orthopox infection/testing is based on the Acute, Generalized Vesicular or Pustular Rash Illness Protocol . Acceptable specimens include: <ul style="list-style-type: none">a. Skin or crust from roof of vesicle or pustuleb. Dried vesicular fluid on a slide (touch prep)c. Dry or wet swab (Dacron or rayon) of lesion pustular fluidd. Punch biopsy (no formalin)e. Ocular impressions or swabs (if conjunctivitis is present)f. Serumg. Tissue culture material demonstrating cytopathic effect (only if non-variola is suspected) All specimen tubes must be labeled with at least the patient name. Ship the specimens as soon as possible after collection. Store the specimens in a refrigerator or freezer if shipping is delayed. Punch biopsy and tissue culture specimens must be shipped on ice. Other specimen types can be shipped at ambient temperature.		
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.		
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.		
Turnaround Time:	One to two days		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form		

Variola virus (Smallpox), Molecular

Test Name:	Detection of variola virus (<u>potential biothreat agent</u>)
Method Name:	Real time polymerase chain reaction
Results:	Positive and Negative for the detection of variola virus
Reference Ranges:	Negative for the detection of variola virus
Clinical Significance:	This test is intended for patients that present with a vesicular/pustular rash illness of unknown origin with a high risk of having contracted Variola virus (Smallpox). Smallpox is one of the most dangerous infections known and although the World Health Organization has declared that smallpox has been eradicated globally, the virus is considered as a potential agent of bioterrorism.
Submission Criteria:	<p>Evaluation of patients for potential Orthopox infection/testing is based on the Acute, Generalized Vesicular or Pustular Rash Illness Protocol.</p> <p>Acceptable specimens include:</p> <ol style="list-style-type: none">Skin or crust from roof of vesicle or pustuleDried vesicular fluid on a slide (touch prep)Dry or wet swab (Dacron or rayon) of lesion pustular fluidPunch biopsy (no formalin)Ocular impressions or swabs (if conjunctivitis is present)SerumTissue culture material demonstrating cytopathic effect (only if non-variola is suspected) <p>All specimen tubes must be labeled with at least the patient name. Ship the specimens as soon as possible after collection. Store the specimens in a refrigerator or freezer if shipping is delayed. Punch biopsy and tissue culture specimens must be shipped on ice. Other specimen types can be shipped at ambient temperature. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.</p>
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.
Turnaround Time:	One to two days
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Communicable Disease Test Requisition Form

Vibrio spp.

Test Name:	Isolation and identification of <i>Vibrio spp.</i>	
Methods:	Culture and biochemical reactions are used for the isolation, identification and serotyping of <i>Vibrio spp.</i>	
Results:	Positive/Negative for the detection of <i>Vibrio spp.</i>	
Reference Ranges:	Negative for the detection <i>Vibrio spp.</i>	
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.	
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen	
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.	
Turnaround Time:	Five days	
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH – Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.	
Submission Form:	Communicable Disease Test Requisition Form	

West Nile Virus

Test Name:	Identification of West Nile Viral (WNV) Infection
Method Name:	The Microsphere Immunofluorescence (MIA) assay Detection of WNV antibodies by viral neutralization in culture (reflex assay for equivocal MIA assay results)
Results:	Results for MIA screen: Detected/Not Detected/Indeterminant Results for Viral Neutralization; Neutralizing Antibody detected to West Nile Virus/No Neutralizing Antibody Detected/Evidence of Flavivirus Infection
Reference Ranges:	Negative for the detection of WNV antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of WNV outbreaks.
Submission Criteria:	Acceptable specimens: <ul style="list-style-type: none">a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i>b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection.
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30 days.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Seven days for the MAC- ELISA assay 14 days for viral neutralization confirmation if necessary
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Arbovirus Test Requisition Form

Western Equine Encephalitis Virus

Test Name:	Identification of Western Equine Encephalitis virus (WEEV) Infection
Method Name:	Detection of IgM antibodies to WEEV using antibody capture enzyme lined immunosorbent assay (MAC-ELISA) Detection of WEEV antibodies by viral neutralization in culture (reflex assay for positive/equivocal MAC-ELISA assay results) <i>Note: All testing performed at the CDC</i>
Results:	Results for Viral Neutralization; Neutralizing Antibody detected to Western Equine Encephalitis/No Neutralizing Antibody Detected
Reference Ranges:	Negative for the detection of WEEV antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of WEEV outbreaks.
Submission Criteria:	Acceptable specimens: a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required). <i>Note: paired serum is required to resolve equivocal results.</i> b. CSF (1 ml minimum volume required) All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the Illinois Department of Public Health by 30 days after collection
Rejection Criteria:	Specimens other than serum or CSF; specimens that have gross hemolysis and/or contamination; insufficient specimen volume; requisition missing or improperly filled out; no patient identifier on specimen; broken or leaked tube in transit; specimens shipped at improper temperatures; specimens collected greater than 30 days.
Authorization:	Prior approval from your local health department with an outbreak investigation number is required. For questions, please contact your local health department or the Communicable Disease Control Section of the Illinois Department of Public Health at 217-782-2016.
Turnaround Time:	Four to six weeks for CDC to perform the assay(s)
Shipping:	IDPH – Chicago Lab Virology Laboratory 2121 W. Taylor St. Chicago, IL 60612
Submission Form:	Arbovirus Test Requisition Form

Yersinia pestis (Plague)

Test Name:	Culture Identification of <i>Yersinia pestis</i> (potential biothreat agent)		
Method Name:	Rapid presumptive identification by real-time polymerase chain reaction (PCR) assay Confirmation by biochemical identification of culture isolate		
Results:	Negative/Positive for the identification of <i>Y. pestis</i> <i>If the test is negative and the isolate is the genus Yersinia, speciation will not be performed unless specific arrangements are made with the Communicable Disease Control Section.</i>		
Reference Ranges:	Negative for the identification of <i>Y. pestis</i>		
Clinical Significance:	Plague is a disease that affects humans and other mammals. It is caused by the bacterium <i>Yersinia pestis</i> . Humans usually get plague after being bitten by a rodent flea that is carrying the bacterium or by handling an infected animal . Plague is infamous for killing millions of people in Europe during the Middle Ages. Today, modern antibiotics are effective in treating plague. Without prompt treatment, the disease can cause serious illness or death. Presently, human plague infections continue to occur in the western United States, but significantly more cases occur in parts of Africa and Asia.		
Submission Criteria:	Request testing if you suspect an isolate may be <i>Y. pestis</i> . See asm.org for the rule-out/in protocols. Submit a pure isolate/culture submitted on an agar slant with any media that will support growth. Do not submit the isolate on an agar plate unless the specimen is being transported by courier. Do not perform further tests. Environmental sample testing is also available through special arrangement. Please contact the Division of Laboratories if environmental testing is requested.		
Rejection Criteria:	Specimens other than those detailed above; improperly filled out Communicable Disease Test Requisition Form ; no patient identifier on specimen; broken specimen tube.		
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.		
Turnaround Time:	One day for presumptive PCR, four days for culture confirmation		
Shipping:	IDPH – Chicago Lab Clinical Microbiology 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Communicable Disease Test Requisition Form		

Yersinia spp.

Test Name:	Isolation and identification of <i>Yersinia spp.</i>
Methods:	Culture and biochemical reactions are used for the isolation and identification of <i>Yersinia spp.</i>
Results:	Positive/Negative for the detection of <i>Yersinia spp.</i>
Reference Ranges:	Negative for the detection <i>Yersinia spp.</i>
Clinical Significance:	Enteric pathogens cause a variety of human diseases. The severity of the disease depends on the virulence of the strain and the condition of the host and can be a mild self-limiting gastroenteritis or become more severe, with bacteremia or typhoid fever, which can be life threatening. Early detection allows for effective management and identification of possible outbreaks.
Submission Criteria:	Clinical - Stool submitted at room temperature in Cary-Blair vial or swab; received by the Illinois Department of Public Health within 72 hours; Referred Isolates – Submit isolate at room temperature on slant [e.g., BHI, Heart infusion (HI) slant] or on sealed plates on solid media that is non-inhibitory (e.g., BAP). Indicate source on request form and specimen
Rejection Criteria:	Specimen received without unique identifier (name or other ID) on the specimen, or the identifier does not match the identifier on the submission form. Specimen received without date of collection. Specimen received without submission form. Specimens not submitted according to submission criteria or according to rules and regulations for transporting clinical specimens or infectious substances.
Turnaround Time:	Five days
Shipping:	IDPH – Chicago Lab IDPH – Springfield Lab Clinical Microbiology Clinical Microbiology 2121 W. Taylor St. 825 N. Rutledge St. Chicago, IL 60612 Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Communicable Disease Test Requisition Form

Alkaline Phosphatase in Milk

Test Name:	Alkaline Phosphatase in Milk												
Method Name:	Charm Paslite												
Results:	Reported as positive or not found. If positive, reported as residual phosphatase, microbial phosphatase, or reactivated phosphatase present.												
Reference Ranges:	>350 mU/L is considered a positive result.												
Clinical Significance:	Detection of improper milk pasteurization or the addition of raw milk to pasteurized milk.												
Submission Criteria:	Samples collected for analysis must be refrigerated (0 C to 4.4 C) at the time of collection. Samples received less than three hours from time of collection may be less than or equal to 7 C if the samples are cooler than when they were collected. Upon receipt in the laboratory, the temperature of each set of samples is determined by recording the temperature of a separate container that has been treated exactly like the samples and transported with them. This pilot sample must be at least ½ the size of the largest container in the cooler. Record the times and dates of sample collection and receipt at the laboratory for each set of samples. Test the samples as soon as possible. If necessary, store the samples at 0 C to 4.4 C. Samples must be tested within 60 hours of collection.												
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0 C to 4.4 C) or are not received within the time required to start testing (60 hours). Samples received in leaky containers will also be rejected.												
Authorization:	Dairy samples are accepted from milk sanitarians employed by the Illinois Department of Public Health's regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the Illinois Department of Public Health's Division of Food and Dairy, as part of the Grade A Milk Program.												
Turnaround Time:	Five days												
Shipping:	<table><tr><td>Chicago Lab</td><td>Springfield Lab</td><td>Carbondale Lab</td></tr><tr><td>Env. Microbiology</td><td>Env. Chemistry</td><td>Env. Microbiology</td></tr><tr><td>2121 W. Taylor St.</td><td>825 N. Rutledge St.</td><td>1155 S. Oakland Ave.</td></tr><tr><td>Chicago, IL 60612</td><td>Springfield, IL 62702</td><td>Carbondale, IL 62902</td></tr></table>	Chicago Lab	Springfield Lab	Carbondale Lab	Env. Microbiology	Env. Chemistry	Env. Microbiology	2121 W. Taylor St.	825 N. Rutledge St.	1155 S. Oakland Ave.	Chicago, IL 60612	Springfield, IL 62702	Carbondale, IL 62902
Chicago Lab	Springfield Lab	Carbondale Lab											
Env. Microbiology	Env. Chemistry	Env. Microbiology											
2121 W. Taylor St.	825 N. Rutledge St.	1155 S. Oakland Ave.											
Chicago, IL 60612	Springfield, IL 62702	Carbondale, IL 62902											
Shipping Kits:	No shipping kits provided by the Illinois Department of Public Health laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.												
Submission Form:	Dairy Sample Submission Form. Forms may be obtained by calling the Springfield laboratory at 217-782-6562.												

***Clostridium perfringens* in Food**

Test Name:	<i>Clostridium perfringens</i> in Food
Method Name:	BAM Method and AOAC Method Chapter 16
Results:	Reported as <i>Clostridium perfringens</i> organisms per gram.
Reference Ranges:	If reported results are greater than 500,000 organisms/gram, <i>Clostridium perfringens</i> is implicated as the causative agent of illness.
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>Clostridium perfringens</i> .
Submission Criteria:	Samples should be representative of the food being tested. Sample size should be 200-400 grams (minimum of 50 g) of food per test requested. Food samples less than 50 grams may be tested if necessary, but the results may not be representative of the sample. Frozen samples should be kept frozen until received in the laboratory. Refrigerated samples should be kept refrigerated until received in the laboratory. Samples should be shipped or transported to the laboratory so that they arrive at the laboratory as soon as possible after collection. Each sample should be logged onto a Food Investigation Submission Form. If more than one sample is submitted, a Sample Cover Sheet must also be filled out. The necessary information includes source, location, temperature, date, time of collection, collector's name, symptoms, and test(s) requested.
Rejection Criteria:	Testing may not be performed if sample labeling or submission form data is insufficient.
Authorization:	Food samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of the Illinois Department of Public Health's Infectious Disease Division and/or the Food and Dairy Division to receive assistance in determining the necessity of testing food samples for <i>Clostridium perfringens</i> . After it is determined by the Division of Infectious Disease and/or the Division of Food and Dairy that testing is necessary, the Illinois Department of Public Health laboratory should be contacted with the method of shipment and the expected time of arrival.
Turnaround Time:	Five to seven days
Shipping:	IDPH – Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Food Sampling Collection Kit: Fax food sampling collection kit requisition to Springfield laboratory at 217-524-7924.
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Coliform (Total and Fecal) in Water

Test Name:	Determination of total and fecal coliform in water
Method Name:	Membrane filtration Standard Methods 9222 A, B D
Results:	Total coliform Present or Not found Total coliform count/100 ml Fecal coliform Present or Not Found Fecal coliform count/100 ml
Reference Range:	Total and Fecal coliform not Found or 0/ 100 ml
Clinical Significance:	Detection of coliform bacteria in water is an indicator of the overall bacteriological quality of the water. Coliform presence is an indicator that the water may contain other pathogenic or disease-causing bacteria.
Submission Criteria:	Use only laboratory supplied collection containers. Sample bottles must be filled to the fill line on the bottle. Include sample identification/location, date and time of collection, sample type and collector's name. Submit 120-150 mL of within 30 hours of collection. Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.
Rejection Criteria:	Samples received that are greater 30 hours from collection. Samples received without a complete test requisition. No date and time of collection.
Authorization:	Prior approval from the local health department or regional office is required.
Turnaround Time:	Four days
Shipping:	Chicago Lab Springfield Lab Env. Microbiology Env. Microbiology 2121 W. Taylor St. 825 N. Rutledge St. Chicago, IL 60612 Springfield, IL 62702
Shipping Kits:	Call the Springfield .laboratory at 217-782-6562 or the Chicago laboratory at 312-793-4760.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.

Coliform (Total and E. coli) in Water

Test Name:	Determination of Total coliforms and <i>E. coli</i> in water												
Method Name:	Colilert Presence/Absence, Quanti-Tray 51 and Quanti-Tray 2000 Standard Methods 9223												
Results:	Total coliform and <i>E. coli</i> Present or Not Found per 100 mL for P/A and Total coliform and <i>E. coli</i> count/100 mL for QT 51 and QT 2000												
Reference Range:	Total and <i>E. coli</i> coliform Not Found or <1/100 mL												
Clinical Significance:	Detection of coliform bacteria in water is an indicator of the overall bacteriological quality of the water. Coliform presence is an indicator that the water may contain other pathogenic or disease-causing bacteria.												
Submission Criteria:	Use only laboratory supplied collection containers. Sample bottles must be filled to the fill line on the bottle. Include sample identification/location, date and time of collection, sample type and collector's name. Submit 120-150 mL of within 30 hours of collection. Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.												
Rejection Criteria:	Samples received that are greater 30 hours from collection. Samples received without a complete test requisition. No date and time of collection.												
Authorization:	Prior approval from the local health department or regional office is required.												
Turnaround Time:	Three days												
Shipping:	<table><tr><td>Chicago Lab</td><td>Springfield Lab</td><td>Carbondale Lab</td></tr><tr><td>Env. Microbiology</td><td>Env. Microbiology</td><td>Env. Microbiology</td></tr><tr><td>2121 W. Taylor St.</td><td>825 N. Rutledge St.</td><td>1155 S. Oakland Ave.</td></tr><tr><td>Chicago, IL 60612</td><td>Springfield, IL 62702</td><td>Carbondale, IL 62902</td></tr></table>	Chicago Lab	Springfield Lab	Carbondale Lab	Env. Microbiology	Env. Microbiology	Env. Microbiology	2121 W. Taylor St.	825 N. Rutledge St.	1155 S. Oakland Ave.	Chicago, IL 60612	Springfield, IL 62702	Carbondale, IL 62902
Chicago Lab	Springfield Lab	Carbondale Lab											
Env. Microbiology	Env. Microbiology	Env. Microbiology											
2121 W. Taylor St.	825 N. Rutledge St.	1155 S. Oakland Ave.											
Chicago, IL 60612	Springfield, IL 62702	Carbondale, IL 62902											
Shipping Kits:	Call Springfield laboratory at 217-782-6562 or the Chicago laboratory at 312-793-4760.												
Submission Form:	Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.												

***E. coli* O157:H7 in Food**

Test Name:	<i>E. coli</i> O157:H7 in Food
Method Name:	BAM Method and AOAC Method Chapter 4
Results:	Reported as present if detected or Not found.
Reference Ranges:	Not found for <i>E. coli</i> O157:H7. Present if detected and is then implicated as the causative agent of illness.
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>E. coli</i> O157:H7.
Submission Criteria:	Samples should be representative of the food being tested. Sample size should be 200-400 grams (minimum of 25 g) of food per test requested. Food samples less than 25 grams may be tested if necessary, but the results may not be representative of the sample. Frozen samples should be kept frozen until received in the laboratory. Refrigerated samples should be kept refrigerated until received in the laboratory. Samples should be shipped or transported to the laboratory so that they arrive at the laboratory as soon as possible after collection. Each sample should be logged onto a Food Investigation Submission Form. If more than one sample is submitted, a Sample Cover Sheet must also be filled out. The necessary information includes source, location, temperature, date,time of collection, collector's name, symptoms, and test(s) requested.
Rejection Criteria:	Testing may not be performed if sample labeling or submission form data is insufficient.
Authorization:	Food samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of the Illinois Department of Public Health's Infectious Disease Division and/or the Food and Dairy Division to receive assistance in determining the necessity of testing food samples for <i>E. coli</i> O157:H7. After it is determined by the Division of Infectious Disease and/or the Division of Food and Dairy that testing is necessary, the Illinois Department of Public Health laboratory should be contacted with the method of shipment and the expected time of arrival.
Turnaround Time:	Five to seven days
Shipping:	IDPH – Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Food Sampling Collection Kit: Fax food sampling collection kit requisition to Springfield laboratory at 217-524-7924.
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Inhibitory Substances in Milk - Charm

Test Name:	Inhibitory Substances in Milk		
Method Name:	Charm SL-3		
Results:	Reported as positive for Beta-lactam or Beta-lactam not found.		
Reference Ranges:	Beta-lactam not found or positive for Beta-lactam		
Clinical Significance:	To detect the presence of 6 of 6 Beta-lactam antibiotics in raw milk, which would indicate that the raw milk was obtained from an unacceptable source. The presence of Beta-lactam antibiotics would also invalidate the coliform and aerobic bacteria counts by inhibiting growth.		
Submission Criteria:	Samples collected for analysis must be refrigerated (0 C to 4.4 C) at the time of collection. Upon receipt in the laboratory, the temperature of each set of samples is determined by recording the temperature of a separate container that has been treated exactly like the samples and transported with them. This pilot sample must be at least ½ the size of the largest container in the cooler. Record the times and dates of sample collection and receipt at the laboratory for each set of samples. Test the samples as soon as possible. If necessary, store the samples at 0 C to 4.4 C. Samples must be tested within 72 hours of collection.		
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0 C to 4.4 C) or are not received within the time required to start testing (72 hours). Samples received in leaky containers will also be rejected.		
Authorization:	Dairy samples are accepted from milk sanitarians employed by the Illinois Department of Public Health's regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the Illinois Department of Public Health's Division of Food and Dairy, as part of the Grade A Milk Program.		
Turnaround Time:	Two days		
Shipping:	Chicago Lab Env. Microbiology 2121 W. Taylor St. Chicago, IL 60612	Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702	Carbondale Lab Env. Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Shipping Kits:	No shipping kits provided by the Illinois Department of Public Health laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.		
Submission Form:	Dairy Sample Submission Form		

Inhibitory Substances in Milk - Delvotest

Test Name:	Inhibitory Substances in Milk		
Method Name:	Delvotest P 5-Pack		
Results:	Reported as positive or not found.		
Reference Ranges:	Beta-lactam not found or positive for Beta-lactam		
Clinical Significance:	To detect the presence of four of six Beta-lactam antibiotics in raw milk and finished milk products which would indicate that the raw milk was obtained from an unacceptable source. The presence of Beta-lactam antibiotics would also invalidate the coliform and aerobic bacteria counts by inhibiting growth.		
Submission Criteria:	Samples collected for analysis must be refrigerated (0 C to 4.4 C) at the time of collection. Upon receipt in the laboratory, the temperature of each set of samples is determined by recording the temperature of a separate container that has been treated exactly like the samples and transported with them. This pilot sample must be at least ½ the size of the largest container in the cooler. Record the times and dates of sample collection and receipt at the laboratory for each set of samples. Test the samples as soon as possible. If necessary, store the samples at 0 C to 4.4 C. Samples must be tested within 72 hours of collection.		
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0 C to 4.4 C) or are not received within the time required to start testing (72 hours). Samples received in leaky containers will also be rejected.		
Authorization:	Dairy samples are accepted from milk sanitarians employed by the Illinois Department of Public Health's regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the Illinois Department of Public Health's Division of Food and Dairy, as part of the Grade A Milk Program.		
Turnaround Time:	Two days		
Shipping:	Chicago Lab Env. Microbiology 2121 W. Taylor St. Chicago, IL 60612	Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702	Carbondale Lab Env. Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Shipping Kits:	No shipping kits provided by Illinois Department of Public Health laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.		
Submission Form:	Dairy Sample Submission Form		

Environmental Lead

Test Name:	Environmental Lead
Method Name:	Determination of Lead in by Inductively Coupled Plasma Atomic Emission Spectroscopy
Results:	Results reported as for: Dust Wipe: ug/wipe, Air Filter: ug/air filter, paints: % and Soils: ug/g
Reference Ranges:	Dust Wipe: < 5 ug, Air Filter <5 ug, Paint <0.005% and Soil <10 ug/g
Clinical Significance:	Source of lead exposure need to be identified. Prolonged exposure to lead causes health problems, including delayed mental and physical development and learning deficiencies in infants and young children.
Submission Criteria:	The Chicago laboratory is accredited for paint, soil, dust wipe and air filter matrixes by the American Industrial Hygiene Association (AHIA) according to requirements of the National Lead Laboratory Accreditation Program (NLLAP). The laboratory will supply sample tubes and dust wipe media upon request. Paint chips should be free of underlying matrix and are analyzed as submitted. Submit paint sample in 50ml. centrifuge tubes. A minimum 200 mg of paint sample is required for analysis. Submit soil samples in 50 ml. centrifuge tubes. A minimum of 5.0 gm. of soil sample shall be submitted. Only dust wipes supplied by the laboratory or wipe materials meeting ASTM E 1792 requirements will be accepted. Dust wipe sample must be collected separately in 50 ml. centrifuge tubes to avoid cross contamination. A control should be supplied along with each batch of submitted wipe. Various foods, toys flatware and other items (matrixes not accredited by AHIA) also can be tested as” Other” upon request. Contact the laboratory for instructions.
Rejection Criteria:	Wipes not supplied by laboratory or wipe materials not meeting ASTM E1792 requirements will be not be accepted. Paint and soil samples not meeting minimum required quantity may not be analyzed. Samples with missing or incomplete forms or sample not properly identified will not be analyzed.
Authorization:	Paint Chips, Dust wipes, soil samples, Air Filter and “Other” samples will be accepted only from the IDPH Division of Environmental Health or LHD.
Turnaround Time:	One to five days
Shipping:	IDPH – Chicago Lab Env. Chemistry 2121 W. Taylor St. Chicago, IL 66012
Shipping Kits:	Call the Chicago Chemistry Laboratory at 312-793-3053
Submission Form:	Lead Sample Submission Form

***Listeria monocytogenes* in Food**

Test Name:	<i>Listeria monocytogenes</i> in Food
Method Name:	BAM Chapter 10 and AOAC (VIDAS)
Results:	Reported as <i>Listeria monocytogenes</i> present or not found. Also, if another <i>Listeria</i> species is found, it is reported as <i>Listeria</i> species present.
Reference Ranges:	<i>Listeria monocytogenes</i> present, <i>Listeria monocytogenes</i> not found, and/or <i>Listeria</i> species present
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>Listeria monocytogenes</i> .
Submission Criteria:	Samples should be representative of the food being tested. Sample size should be 200-400 grams (minimum of 25 g) of food per test requested. Food samples less than 25 grams may be tested if necessary, but the results may not be representative of the sample. Frozen samples should be kept frozen until received in the laboratory. Refrigerated samples should be kept refrigerated until received in the laboratory. Samples should be shipped or transported to the laboratory so that they arrive at the oratory as soon as possible after collection. Each sample should be logged onto a Food Investigation Submission Form. If more than one sample is submitted, a Sample Cover Sheet must also be filled out. The necessary information includes source, location, temperature, date, time of collection, collector's name, symptoms, and test(s) requested.
Rejection Criteria:	Testing may not be performed if sample labeling or submission form data is insufficient.
Authorization:	Food samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of the Illinois Department of Public Health's Infectious Disease Division and/or the Food and Dairy Division to receive assistance in determining the necessity of testing food samples for <i>Listeria</i> . After it is determined by the Division of Infectious Disease and/or the Division of Food and Dairy that testing is necessary, the Illinois Department of Public Health laboratory should be contacted with the method of shipment and the expected time of arrival.
Turnaround Time:	Five to seven days
Shipping:	IDPH – Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Food Sampling Collection Kit: Fax food sampling collection kit requisition to Springfield laboratory at 217-524-7924.
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Nitrate in Water

Test Name:	Nitrate-Nitrogen
Method Name:	Determination of Nitrate Nitrogen by automated colorimetry
Results:	Nitrate Nitrogen in mg/L
Reference Ranges:	0.1 mg/L quantitation limit 10 mg/L maximum contaminant level (USEPA)
Clinical Significance:	<p>Infants below six months who drink water containing nitrate in excess of the maximum contaminant level (MCL) could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.</p> <p>This health effects language is not intended to catalog all possible health effects for nitrate. Rather, it is intended to inform consumers of some of the possible health effects associated with nitrate in drinking water when the rule was finalized.</p>
Submission Criteria:	Samples are collected in 125 ml plastic bottles supplied by the laboratory. At least 100 ml is required for analysis. Samples must be received within 48 hours of collection.
Rejection Criteria:	Insufficient quantity of sample for analysis. Samples received more than 48 hours after collection.
Turnaround Time:	Two to three days
Authorization:	Prior approval from the local health department or regional office is required.
Shipping:	IDPH – Springfield Lab Env Chemistry 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call Springfield laboratory at 217-782-6562.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form. Forms are available by contacting the Springfield laboratory.

Nitrite in Water

Test Name:	Nitrite Nitrogen
Method Name:	Determination of Nitrite Nitrogen by automated colorimetry
Results:	Nitrite Nitrogen concentration in mg/L
Reference Ranges:	0.1 mg/L lower reporting limit 1.0 mg/L maximum contaminant level (USEPA)
Clinical Significance:	<p>Infants below six months who drink water containing nitrite in excess of the maximum contaminant level (MCL) could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.</p> <p>This health effects language is not intended to catalog all possible health effects for nitrite. Rather, it is intended to inform consumers of some of the possible health effects associated with nitrite in drinking water when the rule was finalized.</p>
Submission Criteria:	Samples are collected in 125 ml plastic bottles supplied by the laboratory. At least 100 ml is required for analysis. Samples must be received within 48 hours of collection.
Rejection Criteria:	Insufficient quantity of sample for analysis. Samples received more than 48 hours after collection.
Turnaround Time:	Two to three days
Authorization:	Prior approval from the local health department or regional office is required.
Shipping:	IDPH – Springfield Lab Env Chemistry 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form. Forms are available by contacting the Springfield laboratory.

pH of Water

Test Name:	pH
Method Name:	Determination of pH by electrode
Results:	pH in standard units
Reference Ranges:	1.0 to 14.0 in one tenth standard units
Clinical Significance:	<p>There is no health based limit established for pH of drinking water. pH is a secondary / aesthetic drinking water parameter. The goal is for drinking water pH to be in the 6.5 – 8.5 range.</p> <p>Exposure to extreme pH values results in irritation to the eyes, skin, and mucous membranes. Eye irritation and exacerbation of skin disorders have been associated with pH values greater than 11. In sensitive individuals, gastrointestinal irritation may also occur. Exposure to low pH values can also result in similar effects. Below pH 4, redness and irritation of the eyes have been reported, the severity of which increases with decreasing pH. Below pH 2.5, damage to the epithelium is irreversible and extensive.</p> <p>This health effects language is not intended to catalog all possible health effects for pH. Rather, it is intended to inform consumers of some of the possible health effects associated with the pH of drinking water.</p>
Submission Criteria:	Samples are collected in 125 ml plastic bottles supplied by the laboratory. At least 100 ml is required for analysis. Samples must be received within 48 hours of collection.
Rejection Criteria:	Insufficient quantity of sample for analysis. Samples received more than 48 hours after collection.
Turnaround Time:	Two to three days
Authorization:	Prior approval from the local health department or regional office is required.
Shipping:	IDPH – Springfield Lab Env Chemistry 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form. Forms are available by contacting the Springfield laboratory.

***Ricinus communis* DNA and Ricin Toxin, Molecular**

Test Name:	Identification of <i>R.communis</i> DNA and Ricin Toxin		
Method Name:	Polymerase Chain Reaction (PCR) for <i>R.communis</i> DNA and Time-Resolved Fluorescence Immunoassay (TRF) for Ricin Toxin		
Results:	Negative /Detected/Presumptive for the identification of <i>R.communis</i> DNA and Ricin Toxin		
Reference Ranges:	Negative for the identification of <i>R.communis</i> DNA and Ricin Toxin		
Clinical Significance:	Ricin toxin is a substance found in castor beans (species <i>Ricinus communis</i>). It would take a deliberate act to make ricin toxin and use it as a poison. Unintentional exposure to ricin is highly unlikely, unless through the ingestion of castor beans. Symptoms depend upon the type and level of exposure. Inhalational exposure results in difficulty breathing, fever, cough and chest tightness, leading up to excess fluid in the lungs and respiratory failure. Ingestional exposure leads to vomiting, diarrhea, dehydration, seizures and eventual kidney, liver and spleen failure. There no antidote to exposure; only supportive care can be given. Death usually occurs in 36-72 hours.		
Submission Criteria:	Acceptable specimens include: a. Environmental sample		
Rejection Criteria:	Samples not pre-screened by a certified HAZMAT team for explosive, chemical and radiological contamination; samples not submitted by the FBI or its designee		
Authorization:	No authorization number is required. Please notify your local health department if you suspect this infection.		
Turnaround Time:	One day for PCR, two days for TRF		
Shipping:	IDPH – Chicago Lab Molecular Laboratory 2121 W. Taylor St. Chicago, IL 60612	IDPH-Springfield Lab Clinical Microbiology 825 N. Rutledge St. Springfield, IL 62702	IDPH – Carbondale Lab Clinical Microbiology 1155 S. Oakland Ave. Carbondale, IL 62902
Submission Form:	Threat Agent Laboratory Test Requisition (also serves as a chain of custody form).		

***Salmonella* in Food**

Test Name:	<i>Salmonella</i> in Food
Method Name:	BAM Method and AOAC Method Chapter 5
Results:	Reported as present if detected or Not found.
Reference Ranges:	Not found for <i>Salmonella</i> . Present if detected and is then implicated as the causative agent of illness.
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>Salmonella</i> .
Submission Criteria:	Samples should be representative of the food being tested. Sample size should be 200-400 grams (minimum of 25 g) of food per test requested. Food samples less than 25 grams may be tested if necessary, but the results may not be representative of the sample. Frozen samples should be kept frozen until received in the laboratory. Refrigerated samples should be kept refrigerated until received in the laboratory. Samples should be shipped or transported to the laboratory so that they arrive at the laboratory as soon as possible after collection. Each sample should be logged onto a Food Investigation Submission Form. If more than one sample is submitted, a Sample Cover Sheet must also be filled out. The necessary information includes source, location, temperature, date,time of collection, collector's name, symptoms, and test(s) requested.
Rejection Criteria:	Testing may not be performed if sample labeling or submission form data is insufficient.
Authorization:	Food samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of the Illinois Department of Public Health's Infectious Disease Division and/or the Food and Dairy Division to receive assistance in determining the necessity of testing food samples for <i>E. coli</i> O157:H7. After it is determined by the Division of Infectious Disease and/or the Division of Food and Dairy that testing is necessary, the Illinois Department of Public Health laboratory should be contacted with the method of shipment and the expected time of arrival.
Turnaround Time:	Two to three days if not found or presumptive, Five to 10 days for confirmation of <i>Salmonella</i> serotype
Shipping:	IDPH – Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Food Sampling Collection Kit: Fax food sampling collection kit requisition to Springfield laboratory at 217-524-7924.
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Sterility (Heterotrophic Bacterial Count) of Water

Test Name:	Determination of heterotrophic bacteria in water
Method Name:	Bacterial count using standard methods agar; Standard methods 9215 B
Results:	Quantitative results are provided in HPC count/ ml.
Reference Range:	Not found or 0/100 Bacteria ml
Clinical Significance:	Detection and quantification of heterotrophic bacteria in water is an indicator of general water suitability and sterility.
Submission Criteria:	Use only laboratory supplied collection containers. Samples bottles must be filled to the fill line on the bottle. Include sample identification/location, date and time of collection, sample type and collector's name. Submit 120-150 mL of within 24 hours of collection. Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.
Rejection Criteria:	Samples received that are greater 24 hours from collection. Samples received without a complete submission form. No date and time of collection.
Authorization:	Prior approval from the local health department or regional office is required.
Turnaround Time:	Four days
Shipping:	Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form. Forms are available by contacting the Springfield laboratory.

Streptococcus (Fecal) in Water

Test Name:	Determination of fecal <i>Streptococcus sp.</i> in water
Method Name:	Membrane filtration
Results:	Fecal Strep count/100 ml
Reference Range:	Not found or 0/100 Bacteria ml
Clinical Significance:	Detection of fecal streptococcus in water is an indicator fecal contamination of possible livestock origin
Submission Criteria:	Use only laboratory supplied collection containers. Samples bottles must be filled to the fill line on the bottle. Include sample identification/location, date and time of collection, sample type and collector's name. Submit 120-150 mL of within 30 hours of collection. Use the Illinois Department of Public Health's approved water submission form appropriate for sample type.
Rejection Criteria:	Samples received that are greater 30 hours from collection. Samples received without a complete submission form. No date and time of collection
Authorization:	Prior approval from the local health department or regional office is required.
Turnaround Time:	Three days
Shipping:	IDPH – Springfield Lab Env. Microbiology 825 N. Rutledge St. Springfield, IL 62702
Shipping Kits:	Call the Springfield laboratory at 217-782-6562.
Submission Form:	Use the Illinois Department of Public Health's approved water submission form. Forms are available by contacting the Springfield laboratory.