



Illinois Department of Public Health

Division of Laboratories

Manual of Services

May 2018

Mission Statement

The mission of Illinois Department of Public Health (IDPH) 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 high 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 our testing data. The following is a list of those certification programs:

- Clinical Laboratory Improvement Amendments (CLIA) - Each lab 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 lab in the Division has a Select Agent Certificate. This certificate is necessary for biological threat agent testing.
- American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP, LLC). The Chicago Lab is accredited to test paint, soil, dust wipes, and air filter to determine the level of lead in these samples.
- Certified water microbiology and dairy labs - The Carbondale and Chicago laboratories in the Division are certified by IDPH certification/evaluation officers to perform water and dairy testing.
- United States Food and Drug Administration (FDA) – The Springfield lab holds a certificate for dairy lab grade testing.
- United States Environmental Protection Agency (EPA) –The Springfield Lab is accredited by the EPA for drinking water testing.

This manual is a guide to the testing offered by IDPH, 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, high 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 United States Department of Transportation, United States 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. The purpose of this manual is to provide information about each of the tests performed and any 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 IDPH 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 that is performed by the Division of Labs supports 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 (LHDs) and IDPH 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 that are submitted to the laboratory without proper authorization will not be tested. Lab staff will contact the submitter and determine if the sample/specimen will be returned or destroyed.

Table of Contents

[General Requirements](#)

[Division of Laboratories – Hours and Contact Information](#)

[Emergency Response Procedures](#)

[Services Available at U.S. Centers for Disease Control and Prevention](#)

[Environmental Laboratory Certification \(Water and Dairy labs\)](#)

IDPH Clinical Tests

[Arbovirus \(overview\)](#)

[Bacillus anthracis \(Anthrax\)](#)

[Bioterrorism Threat Agents \(overview\)](#)

[Bordetella pertussis \(whooping cough; molecular\)](#)

[Brucella spp. \(Brucellosis\)](#)

[Burkholderia pseudomallei \(Meliodosis\)](#)

[Burkholderia mallei \(Glanders\)](#)

[California Encephalitis virus](#)

[Chikungunya Virus \(molecular\)](#)

[Chikungunya Virus \(serology\)](#)

[Chlamydia trachomatis \(molecular screen\)](#)

[Coxiella burnetii \(Q fever\)](#)

[Dengue virus \(molecular\)](#)

[Dengue virus \(serology\)](#)

[Eastern Encephalitis virus](#)

[Ebola Virus](#)

[Enteric pathogens \(overview\)](#)

[Escherichia coli \(shiga toxin producers, enteric pathogen\)](#)

[Francisella tularensis \(Tularemia\)](#)

[Haemophilus influenza](#)

[Human Immunodeficiency virus, types 1 and 2 \(antibody screen\) - Serum](#)

[Influenza virus, Molecular](#)

[Lead \(blood\)](#)

[Legionella Urinary Antigen](#)

[Listeria monocytogenes](#)

[Novel Coronavirus \(MERS-CoV\) Molecular](#)

[Measles virus \(Rubeola; molecular\)](#)

[Mumps virus \(molecular\)](#)

[Mycobacterium tuberculosis, acid fast bacilli smear analysis](#)

[Mycobacterium tuberculosis, Primary Clinical Specimens](#)

[Mycobacterium tuberculosis, Culture Confirmation](#)

[Mycobacterium tuberculosis, drug susceptibility in culture](#)

[Mycobacterium tuberculosis, strain genotyping](#)

[Neisseria gonorrhoeae \(culture\)](#)

[Neisseria gonorrhoeae \(molecular screen\)](#)

[Neisseria meningitidis](#)

[Newborn Screening](#)

[Norovirus, G1 and G2 \(molecular\)](#)

[Orthopox screen, non-variola \(molecular\)](#)

[Plasmodium spp. \(malaria\)](#)

[Rabies virus \(animal test only\)](#)
[Saint Louis Encephalitis virus](#)
[Salmonella spp. \(enteric pathogen\)](#)
[Shigella spp. \(enteric pathogen\)](#)
[Treponema pallidum \(syphilis\)](#)
[Varicella-zoster virus \(chicken pox; molecular\)](#)
[Variola Virus \(Smallpox; molecular\)](#)
[Vibrio spp. \(enteric pathogen\)](#)
[Western Encephalitis virus](#)
[*Yersinia pestis* \(Plague\)](#)
[*Yersinia* spp. \(enteric pathogen\)](#)
[Zika Virus \(molecular\)](#)
[Zika Virus \(serology\)](#)

IDPH Environmental Tests

[Aerobic and Coliform Count in Dairy Products using Petri-film](#)
[Alkaline Phosphatase in Dairy Samples](#)
[Total Coliform and *E. coli* Coliform in Water - Colilert](#)
[*E. coli* O157:H7 in Food or Environmental Swabs/Sponges](#)
[Environmental Lead](#)
[Inhibitory Substances in Dairy Samples - Charm](#)
[Inhibitory Substances in Dairy Samples - Delvotest](#)
[Legionella pneumophila in Water - Legiolert](#)
[*Listeria species* in Food and Environmental Swabs/Sponges](#)
[Residual Bacterial Count in Milk Containers](#)
[Ricin Toxin](#)
[*Salmonella* in Food and Environmental Swabs/Sponges](#)
[Total Coliform and *E. coli* in Dairy Water -MTF method](#)

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 the 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 that the outside of the mailing container indicates which laboratory section is to receive the samples (e.g., Enteric, Bacteriology, Parasitology, Environmental Chemistry, etc.)
- 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 that is performed by the Division of Labs supports public health programs by providing surveillance data. As a result, it is critical that the reports for tests that are conducted by the Division of Labs are provided to submitters, LHDs, and IDPH programs. Results are provided through a combination of mechanisms which include electronic laboratory reporting, fax, and mailed paper results. If you have questions about a particular test and the mechanism by which it is reported, please contact the Springfield laboratory and speak with our Data Management staff at 217-782-6562.

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 8am-4:30pm except on state designated holidays. The State of Illinois holiday schedule is available by clicking this link: [Holiday schedule](#)

To contact IDPH:

TTY (hearing impaired use only)

800-547-0466

Chicago Laboratory

Illinois Department of Public Health

Division of Laboratories

2121 W. Taylor Street

Chicago, IL 60612

Main Number (all sections)

312-793-4760

(Fax) 312-793-1322

Springfield Laboratory

Illinois Department of Public Health

Division of Laboratories

825 N. Rutledge Street

Springfield, IL 62702

Main Number (all sections)

217-782-6562

(Fax) 217-524-7924

Carbondale Laboratory

Illinois Department of Public Health

Division of Laboratories

1155 South Oakland Avenue

Carbondale, IL 62901

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

Please ask to be directed to IDPH's emergency officer. They can provide you further instructions. If warranted, the emergency officer will arrange to have the closest IDPH 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 lab within the Division. In this way, surge capacity for Division is provided by our other labs 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 IDPH 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 LHD or the applicable IDPH Division of Infectious Disease Section. If you have questions about submission of specimens to CDC for testing, please contact your LHD or IDPH at 217-782-2016.

Once approval to submit the specimen has been obtained through the Division of Infectious Disease or LHD, please 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 IDPH.**

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.

See submission criterion for various diseases at [CDC](#).

Environmental Laboratory Certification

IDPH 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 IDPH'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
Division of Laboratories
825 N. Rutledge Street
Springfield, IL 62702
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 IDPH 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 IDPH'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
Division of Laboratories
825 N. Rutledge Street
Springfield, IL 62702
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 IDPH 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 IDPH'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
Division of Laboratories
825 N. Rutledge Street
Springfield, IL 62702
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.

Arbovirus Overview

The IDPH 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). 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. [Chikungunya \(tested by the CDC\)](#)
3. [Dengue virus \(DV\) \(tested by the CDC\)](#)
4. [Eastern Equine Encephalitis virus \(EEEV; tested by the CDC\)](#)
5. [Saint Louis Encephalitis virus \(SLEV; tested by CDC\)](#)
6. [Western Equine Encephalitis virus \(WEEV; tested by the CDC\)](#)
7. [ZIKA](#)

What tests are performed?

1. Screening assays for the presence of IgM antibody including:
 - a. The IgM antibody-capture enzyme-linked immunosorbent assay (MAC ELISA) detects antibodies to Zika virus, CEV, DV, and Chikungunya.
2. Real-time, reverse transcriptase Polymerase Chain reaction detection (rt-RT-PCR) in acute specimens for:
 - a. Chikungunya, Dengue, and Zika Viruses.

Authorization for testing is required

For questions, please contact your LHD or Communicable Disease Control Section of the IDPH 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 bio-threat 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 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 Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn-around Time:	Presumptive PCR: 1 day Culture confirmation: 5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Communicable Disease Test Requisition Form

Bioterrorism Threat Agents

The IDPH 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 on individual agent page 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 [LHD](#) or IDPH's Communicable Disease Control Section at 217-782-2016.

The IDPH utilizes protocols developed by the 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 Labs if environmental testing is requested. Use the [Threat Agent Laboratory Test Request](#) form for environmental sample submission.

***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 spp.</i> 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 spp.</i> DNA.
Clinical Significance:	Early detection allows for effective clinical management and identification of possible outbreaks of <i>B. pertussis</i> . See the IDPH Communicable Disease intranet website for more information about the disease.
Submission Criteria:	Acceptable specimens include nasopharyngeal swabs or referred cultures. Use only dacron or rayon nasopharyngeal swabs. 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 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; no authorization for testing.
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 IDPH at 217-785-7165
Turn Around Time:	3 days
Ship to:	Carbondale IDPH Lab
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>Note: 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:	<i>Brucella sp.</i> are facultative intracellular gram negative staining bacilli capable of producing the disease " Brucellosis " 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 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. 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 Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required; submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	Presumptive PCR: 1 day Culture confirmation: 5-7 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Communicable Disease Test Requisition Form

***Burkholderia pseudomallei* (Meloidosis)**
***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 Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	Presumptive PCR: 1 day Culture confirmation: 4 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
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) Confirmation test by PRNT is performed at CDC
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) collected in gold top/serum separator (SST). <i>Note: paired serum is required to resolve equivocal results.</i>b. CSF (1 ml minimum volume required) <p>All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the IDPH by 30 days after collection.</p>
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 30 days.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	7 days for the ELISA assay 4-6 weeks for viral neutralization confirmation at CDC, if necessary
Shipping:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Chikungunya Virus-Molecular

Test Name:	Identification of Chikungunya Virus in Acute Specimens
Method Name:	Triplex Real-Time, Reverse Transcriptase - Polymerase Chain Reaction (PCR)
Results:	Negative/Positive/Inconclusive for the identification of Chikungunya Virus RNA
Reference Ranges:	Negative for the identification of Chikungunya Viral RNA
Clinical Significance:	<p>The prevalence and range of Chikungunya infections have increased dramatically in the last few decades. It often causes large outbreaks with high attack rates, often affecting upwards of one-third of a population. There is an incubation period of two-four days after being bitten by an infected mosquito. Symptom onset is abrupt, with high fever, headache, back pain, retinitis, myalgia, arthralgia (sometimes severe), and macropapular rash. The symptoms generally resolve in 7-10 days, with the exception of the arthralgia, which can last for years after the infection. There are no vaccines or pharmaceuticals to treat Dengue infection. Testing by EUA (Emergency Use Authorization) was approved by the Secretary of Health and Human Services on March 17, 2016.</p>
Submission Criteria:	<p>Acceptable specimens include:</p> <ol style="list-style-type: none">Serum (Centrifuged to separate) collected in gold top/serum separator (SST)CSF (1 ml minimum volume required)Whole Blood and Amniotic Fluid (0.5 mL required with a patient matched serum specimen)Specimens must be transported on dry ice (preferred) or ice packs for receipt at the IDPH Laboratory within 72 hours of collection. If specimens need to be stored for more than 72 hours, but they must be frozen at -70°C. Frozen specimens must be shipped to the IDPH Laboratory on dry ice.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out testing requisition forms; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	2 days
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Chikungunya Virus – Serology (For Epidemiological Use Only)

Test Name:	Identification of Chikungunya Viral (CHIK-V) Infection
Method Name:	Detection of IgM antibodies to (CHIK-V) using antibody capture enzyme linked immunosorbent assay (MAC-ELISA) Detection of CHIK-V antibodies by viral neutralization in culture (reflex assay for negative MAC-ELISA assay results; performed at the CDC)
Results:	Results for ELISA screen: Negative/Positive/Borderline Results for Viral Neutralization: Neutralizing Antibody detected Chikungunya virus/No Neutralizing Antibody
Reference Ranges:	Negative for the detection of CHIK-V antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of Chikungunya outbreaks.
Submission Criteria:	Acceptable specimens include: <ol style="list-style-type: none">Acute phase and convalescent phase sera (0.5 ml minimum volume of each required) collected in gold top/serum separator (SST). <i>Note: paired serum is required to resolve equivocal results.</i>CSF (1 ml minimum volume required) <p>All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the IDPH by 30 days after collection.</p>
Rejection Criteria:	Specimens other than serum; 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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	7 days for the MAC- ELISA assay 4-6 Weeks for viral neutralization confirmation by CDC if necessary
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Chlamydia trachomatis/Neisseria gonorrhoeae
(Molecular STD Screening Panel)

Test Name:	Detection of <i>Neisseria gonorrhoeae</i> (NG) and/ <i>Chlamydia trachomatis</i> (CT)
Method Name:	Nucleic acid amplification qualitative DNA assay
Results:	Positive/Negative for the detection of <i>Neisseria gonorrhoeae</i> (NG) and/or <i>Chlamydia trachomatis</i> (CT)
Reference Ranges:	Negative for the detection of <i>Neisseria gonorrhoeae</i> and <i>Chlamydia trachomatis</i>
Clinical Significance:	<i>Neisseria gonorrhoeae</i> infection of women can lead to pelvic inflammatory disease, infertility, ectopic pregnancy, and chronic pelvic pain. In men <i>Neisseria gonorrhoeae</i> can lead to acute urethritis and dysuria. <i>Chlamydia trachomatis</i> infections in women can cause long-term sequelae such as pelvic inflammatory disease and infertility, in addition to the birth of underweight babies. <i>Chlamydia trachomatis</i> –infection of men can result in acute urethritis or epididymitis and chronic proctitis. Transmission of <i>N. gonorrhoeae</i> and <i>C. trachomatis</i> occurs through sexual contact, but can also take place in the birth canal leading to neonatal conjunctivitis and/or <i>Chlamydia pneumoniae</i> . Infections with <i>C. trachomatis</i> and <i>N. Gonorrhoeae</i> are common in extragenital sites in certain populations, such as MSM. Since extragenital infections are common in MSM, and most infections are asymptomatic, annual screening is recommended. No recommendations for extragenital screening exist for women, but rectal and oropharyngeal infections are not uncommon.
Submission Criteria:	Endocervical swab, vaginal swab, rectal swab, throat swab and male and female urine specimens. Urine (neat) must be transferred into the urine collection tube within 24 hours of collection. See specimen collection instruction at this link .
Rejection Criteria:	The specimen is too old for testing (must be tested within 12 months of collection and be stored at 2-30°C); expired swab collection kit or urine transport tube; no identifier on specimen; improperly collected specimen, quantity not sufficient or tube over-filled, provider not authorized for testing.
Authorization:	Providers are authorized by the IDPH; Office of Health Protection; STD Section at 217-782-2747. A provider number will be given which should be included on the submission form.
Turn Around Time:	4 business days
Ship to:	Carbondale IDPH Lab
Shipping Kits:	Contact the Springfield laboratory at 217-782-6562.
Submission Form:	HIV/STD Submission 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:	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.
Submission Criteria:	Acceptable specimens include: <ul style="list-style-type: none">a. Blood collected in purple top/EDTA tube.b. Environmental sample testing is also available through special arrangement. Please contact the Division of Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	1 day
Ship to:	Chicago and Springfield IDPH Lab
Submission Form:	Communicable Disease Test Requisition Form

Dengue Virus-Molecular

Test Name:	Identification of Dengue Virus in Acute Specimens
Method Name:	Triplex Real-Time, Reverse Transcriptase - Polymerase Chain Reaction (PCR)
Results:	Negative / Positive/Inconclusive for the identification of Dengue Virus RNA
Reference Ranges:	Negative for the identification of Dengue Viral RNA
Clinical Significance:	Dengue virus causes as many as 400 million infections annually. The <u>acute phase</u> begins 4-7 days after a mosquito bite, and can last from 3-10 days. A person bitten by an uninfected mosquito can transmit the disease back to the mosquito in this early viremic stage. This phase, or Clinical Dengue Fever, is marked by a high fever and at least two of the following symptoms: joint pain, severe eye pain, severe headache, arthralgia, bone pain, rash, mild bleeding from mucous membranes, and low white cell count. The <u>critical phase</u> begins when the fever declines, and more severe symptoms emerge (Dengue Hemorrhagic Fever), when capillaries become permeable and begin leaking fluid into the peritoneum (causing ascites) and pleural cavity (causing pleural effusions). These complications may lead to failure of the circulatory system, shock and death (Dengue Shock Syndrome). The convalescent phase can last an additional 4-7 days. There are no vaccines or pharmaceuticals to treat Dengue infection. Testing by EUA (Emergency Use Authorization) was approved by the Secretary of Health and Human Services on March 17, 2016.
Submission Criteria:	Acceptable specimens include: <ol style="list-style-type: none">Serum (Centrifuged to separate) collected in gold top/serum separator (SST)CSF (1 ml minimum volume required)Whole Blood and Amniotic Fluid (0.5 mL required with a patient matched serum specimen)Specimens must be transported on dry ice (preferred) or ice packs for receipt at the IDPH Laboratory within 72 hours of collection. If specimens need to be stored for more than 72 hours, but they must be frozen at -70°C. Frozen specimens must be shipped to the IDPH Laboratory on dry ice.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out requisition forms; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	2 days
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Dengue Virus-Serology (For Epidemiological Use Only)

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/Borderline 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) collected in gold top/serum separator (SST). <i>Note: paired serum is required to resolve borderline results.</i> <p>All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the IDPH by 30 days after collection.</p>
Rejection Criteria:	Specimens other than serum; 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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	7 days for the MAC- ELISA assay 4-6 Weeks for viral neutralization confirmation by CDC if necessary
Ship to:	Chicago IDPH Lab
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 linked 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: <ol style="list-style-type: none">Acute phase and convalescent phase sera (0.5 ml minimum volume of each required collected in gold top/serum separator (SST). <i>Note: paired serum is required to resolve equivocal results.</i>CSF (1 ml minimum volume required) <p>All specimen tubes must be labeled with at least the patient name. Ship specimens with ice packs. Specimens must arrive at the IDPH by 30 days after collection</p>
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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	4-6 weeks for CDC to perform the assay(s).
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Ebola Zaire Virus

Test Name:	Identification of Ebola Zaire Virus in Acute Specimens
Method Name:	Real-Time, Reverse Transcriptase -Polymerase Chain Reaction (PCR) for the identification of Ebola Zaire Virus (NP and VP40 gene target assays)
Results:	Negative / Positive/Equivocal/Inconclusive for the identification of Ebola Zaire Virus RNA
Reference Ranges:	Negative for the identification of Ebola Zaire Viral RNA
Clinical Significance:	<p>Ebola virus is detected in blood only after onset of symptoms, most notably fever, which accompany the rise in circulating virus within the patient's body. It may take up to three days after symptoms start for the virus to reach detectable levels. Ebola infection is extremely contagious, making the identification of infected individuals a public health emergency. Ebola spreads through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with blood or body fluids of a person who is sick with or has died from Ebola, objects (like needles and syringes) that have been contaminated with body fluids from a person who is sick with Ebola or the body of a person who has died from Ebola, infected fruit bats or primates (apes and monkeys), and possibly from contact with semen from a man who has recovered from Ebola. There are no vaccines or pharmaceuticals to treat Ebola Virus infection. Testing by EUA (Emergency Use Authorization) was approved by the Secretary of Health and Human Services in January, 2016.</p>
Submission Criteria:	<p>Acceptable specimens include: Note: See CDC guidance for collection, transport, and submission at this link.</p> <p>Whole blood is the preferred specimen type for EVD testing. Serum, plasma and urine are also acceptable specimens for testing. Urine should not be the sole specimen type tested from a patient and must be sent with a paired specimen.</p> <ol style="list-style-type: none">Whole blood – Collect two lavender top blood tubes containing whole blood preserved with EDTA (minimum volume of 4mL each). Collect blood in plastic tubes only. Do not collect in glass tubes. Do not centrifuge specimens. Store and transport specimens at 2-8°C.Serum – Collect serum in a gold top serum separator tube and centrifuge to separate. Store and transport specimens at 2-8°C.Plasma – Collect whole blood into commercially available anticoagulant-treated tubes e.g., EDTA-treated (lavender tops) or citrate-treated (light blue tops). Cells are removed from plasma by centrifugation for 10 minutes at 1,000–2,000xg using a refrigerated centrifuge. The resulting supernatant is designated plasma. Following centrifugation, it is important to immediately transfer the liquid component (plasma) into a clean polypropylene tube using a Pasteur pipette. Store and transport specimens at 2-8°C.Urine – Collect urine in a 15ml conical plastic tube. Store and transport specimens at 2-8°C.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your LHD is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.

Turn Around Time: 2 days

Ship to: [Chicago IDPH Lab](#)

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 , Vibrio , Yersinia , (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>Vibrio</i> , <i>Yersinia</i>
Reference Ranges:	Negative or confirmation of <i>Salmonella</i> , <i>Shigella</i> , Shiga Toxin producing <i>E. coli</i> , <i>Vibrio</i> , <i>Yersinia</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 IDPH 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:	For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016. No authorization number is required. Submission is required by Illinois Administrative Rule Part 690.
Turn Around Time:	7 days
Ship to:	Chicago or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Disease Test Requisition Form

Escherichia coli (shiga toxin producing)

Test Name:	Isolation and identification of shiga toxin-producing <i>E. coli</i>
Method Name:	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 IDPH 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.
Turn Around Time:	7 days
Ship to:	Chicago or Springfield IDPH Lab
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>Note: 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:	<u>Tularemia</u> 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 Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	Presumptive PCR: 1 day Culture confirmation: 5-7 days
Ship to:	<u>Carbondale, Chicago, or Springfield IDPH Lab</u>
Submission Form:	<u>Communicable Disease Test Requisition Form</u>

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> isolates 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 authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	3-5 days
Ship to:	Chicago IDPH Lab
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 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 of blood in a gold top/serum separator tube (SST). Blood collected in a serum separator tube (SST) and centrifuged should be shipped in a cooler on cold packs on the same day as collected. Every effort should be made to ship specimens on the same day as collected. If it is not possible to ship the same day as collected, store at 2-8°C and ship on cold packs the next business day. Label specimens with a unique identifier. Provide a completed HIV/STD requisition form with the specimen.
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 7 days old from collection if stored cold• Specimen greater than 3 days old from collection if stored at room temperature
Authorization:	Prior approval from the IDPH; Office of Health Protection; STD Section at 217-782-2747 is necessary.
Turn Around Time:	2 days for screening; 2-3 days for additional tests
Ship to:	Carbondale IDPH Lab
Shipping Kits:	Call the Springfield IDPH Lab at 217-782-6562
Submission Form:	HIV/STD Submission Form

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, subtypes Yamagata (YAM) and Victoria (VIC). Avian influenza H5N1 and H7N9 are tested only if epidemiologically consistent with infection.
Reference Ranges:	Negative for Influenza A 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 3 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 IDPH 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 IDPH 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 submission form; specimens without submission form; submission form/specimen tube do not match; no patient identifier on specimen; broken specimen tube; specimens sent as dry swabs (no VTM); specimens shipped at improper temperatures; specimen stored and shipped at 4°C when received greater than 72 hours from collection; specimens shipped at room temperature.
Authorization:	Individual specimen authorization is not needed for sentinel sites. All others submissions need approval from your LHD. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016. Local Health Departments may complete the online submission form at this link .
Turn Around Time:	3-5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Respiratory/Influenza Submission Form.

Lead, Blood

Test Name:	Quantification of lead levels in blood
Method Name:	Inductively coupled plasma mass spectrometry (ICP-MS)
Results:	Lead measurements are reported as microgram/deciliter blood ($\mu\text{g/dL}$). Detection level is 1 $\mu\text{g/dL}$.
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:	<p>Micro Specimens: For capillary specimens, fill EDTA micro-collection tube to at least above the first line marked on the tube. 100ul (microliter) of whole blood is required.</p> <p>Macro Specimens: Submit a minimum of 1mL (milliliter) of whole blood drawn into a trace metal free vacutainer containing either EDTA or Heparin anticoagulant.</p> <p>Mix both capillary and venous specimens by gentle inversion five to 10 times. 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.</p>
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, specimens greater than 45 days old.
Authorization:	Prior approval through the local health department or IDPH Environmental Health Division is required.
Turn Around Time:	3 days
Ship to:	Springfield IDPH Lab
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* Urinary Antigen**

Test Name:	Detection of <i>Legionella</i> Urinary Antigen
Method Name:	Immunochromatographic membrane assay
Results:	<p>Presumptive Positive for <i>L. pneumophila</i> serogroup 1 antigen in urine, suggesting current or past infection.</p> <p>Presumptive Negative for <i>L. pneumophila</i> serogroup 1 antigen in urine, suggesting no recent or current infection. Infection due to <i>Legionella</i> cannot be ruled out since other serogroups and species may cause disease, antigen may not be present in urine in early infection, and the level of antigen present in the urine may be below the detection limit of the test.</p>
Reference Range:	Negative
Clinical Significance:	<i>Legionella pneumophila</i> is responsible for 80-90% of reported cases of <i>Legionella</i> infection with serogroup 1 accounting for greater than 70% of all legionellosis. This test allows for presumptive early diagnosis of <i>Legionella pneumophila</i> serogroup 1 infection through detection of a specific soluble antigen present in the urine of patients with Legionnaires' Disease. <i>Legionella pneumophila</i> serogroup 1 antigen has been detected in urine as early as three days after the onset of symptoms.
Submission Criteria:	Urine specimens ONLY; random collection; >2 mL of urine. Collect in a sterile specimen container. Specimens must be shipped refrigerated or frozen
Rejection Criteria:	Any specimen other than urine; < 2 mL of urine; non-sterile specimen container; received room temperature; improperly completed submission form; specimen without submission form; submission form/specimen container do not match; no patient identifier on specimen; broken / leaking specimen container.
Authorization:	Submissions need approval from the Communicable Disease Control Section of IDPH at 217-782-2016.
Turn Around Time:	1 day
Ship to:	Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Diseases Laboratory Test Requisition

Listeria monocytogenes

Test Name:	Pulsed Field Gel Electrophoresis
Method Name:	Listeria - Includes pulsed field gel electrophoresis and submission to CDC for genetic studies such as Whole Genome Sequencing (WGS) or Multiple-Locus Variable number tandem repeat analysis (MLVA) Species other than Listeria monocytogenes sent
Results:	PFGE pattern submitted to national database
Reference Ranges:	N/A
Clinical Significance:	Cause of Listeriosis, a serious infection usually caused by eating food contaminated with the bacteria Listeria monocytogenes. The disease primarily affects older adults, pregnant women, newborns, and adults with weakened immune systems. Symptoms include fever, muscle aches, and diarrhea.
Submission Criteria:	Clinical or Environmental Isolate - Isolate submitted at room temperature on nonselective slant such as TSA, HIA, etc. 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:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	5 days
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
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 Authorization) 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. Sputuma. Lower Respiratory Tract aspirates/washesb. Serum – collected in a gold top/serum separator tube (SST)
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	2 days
Ship to:	Chicago IDPH Lab
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 4-12 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 (VTM) or universal transport media (UTM) are also acceptable. Swabs must be submitted cold, shipped overnight delivery, and must be received by 96 hours from the date after collection. Specimens must be sent for overnight delivery. For additional information on specimen submission please click here .
Rejection Criteria:	Unacceptable specimens include those with mismatched requisitions, specimens without patient identifiers, specimens not shipped in VTM or UTM, any non-respiratory specimens, and any specimens not shipped or received cold.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	3 days
Ship to:	Chicago or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Disease Test Requisition Form

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 5 days after the onset of parotitis.</p>
Submission Criteria:	Specimens for mumps testing are swab specimens collected from the buccal cavity and placed in viral transport media (VTM) or universal transport media (UTM). Swabs must be submitted cold, shipped overnight delivery, and must be received within 96 hours of collection. Specimens must be sent for overnight delivery. 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, specimens not shipped in VTM or UTM, any specimens not shipped or received cold, and specimens received >4 days after collection.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	3 days
Ship to:	Chicago or Springfield IDPH Lab
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 # 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 test request 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 LHD approval to submit specimens.

Turn Around Time: 24 Hours

Ship to: [Chicago IDPH Lab](#)

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

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

***Mycobacterium tuberculosis*, Primary Clinical Specimens**

Test Name:	Direct detection of the <i>M. tuberculosis</i> in primary clinical specimens
Method Name:	Detection of rifampin-resistant <i>Mycobacterium tuberculosis</i> complex (MTBC) by Cepheid GeneXpert Assay.
Results:	1) MTB NOT DETECTED 2) MTB DETECTED; Rifampin Resistance NOT DETECTED 3) MTB DETECTED; Rifampin Resistance DETECTED 4) MTB DETECTED; Rifampin Resistance INTERMEDIATE 5) INVALID; (The presence or absence of MTB cannot be determined)
Reference Ranges:	MTBC not detected; Rifampin resistance not detected.
Clinical Significance:	Direct detection of the rifampin-resistant <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 test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	Local Health Departments are authorized to submit specimens. Other private submitters will require LHD approval to submit specimens.
Turn Around Time:	24 Hours
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call the Chicago IDPH 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 Cepheid GeneXpert Assay. Detection of rifampin-resistant <i>Mycobacterium tuberculosis</i> complex (MTBC) by Cepheid GeneXpert Assay
Results:	1) MTB NOT DETECTED 2) MTB DETECTED; Rifampin Resistance NOT DETECTED 3) MTB DETECTED; Rifampin Resistance DETECTED 4) MTB DETECTED; Rifampin Resistance INTERMEDIATE 5) INVALID (The presence or absence of MTB cannot be determined)
Reference Ranges:	MTBC not detected; Rifampin resistance not detected.
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 <i>Mycobacterium</i> cultures.
Submission Criteria:	Click here for acceptable specimens; collection and shipping instructions. <i>Mycobacterium</i> isolates. Submit on agar slant tubes; (See shipping instructions)
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request 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 LHD approval to submit specimens.
Turn Around Time:	Variable – dependent upon culture growth rate
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call the Chicago IDPH 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:	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. The IDPH 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.
Submission Criteria:	1. Click here for acceptable specimens; collection and shipping instructions. 2. <i>Mycobacterium tuberculosis</i> complex isolates. Submit on agar slant tubes;
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	Local Health Departments are authorized to submit specimens. Other private submitters will require LHD approval to submit specimens.
Turn Around Time:	7-10 days after the identification of culture isolate as <i>M. tuberculosis</i> complex
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call the Chicago IDPH laboratory at 312-793-4760
Submission Form:	Communicable Disease Test Requisition Form

***Mycobacterium tuberculosis* Strain Genotyping**

Test Name:	Identification of <i>Mycobacterium tuberculosis</i> 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 <i>M. tuberculosis</i> .
Submission Criteria:	All facilities are obligated by law to forward <i>M. tuberculosis</i> 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 test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	Local Health Departments are authorized to submit specimens. Other private submitters will require LHD approval to submit specimens.
Turn Around Time:	NA
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call the Chicago IDPH 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 IDPH; Office of Health Protection; STD Section. The STD Section can be reached at 217-782-2747.
Turn Around Time:	3-5 days
Ship to:	Chicago IDPH Lab
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 normally sterile site (such as spinal fluid and blood) is highly pathogenic and life threatening and required to be submitted according to Illinois Administrative Rule Part 690.
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 IDPH labs for confirmatory identification and serogrouping.
Rejection Criteria:	Improperly filled out submission form; no patient identifier on specimen; mismatched names; broken or leaking specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
Turn Around Time:	3-5 days
Ship to:	Chicago IDPH Lab
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
- Alpha and beta 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)
Lysosomal Storage Diseases

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

*Krabbe screening will be added to the panel subject to approval of the follow up DNA testing contract and availability of Laboratory Information support.

Unsatisfactory Specimens: Unsatisfactory specimen reports indicate the specimen was improperly collected, handled or submitted, as determined by the Department'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. Additional information about specimen collection and submission is available [here](#).

Turn Around Time: 4 days for abnormal test results and 10 days for normal test. Positive or abnormal results are provided as quickly as possible.

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

Ship to: [Chicago IDPH Lab](#)

Shipping Kits: Call the Chicago Laboratory at 312-793-4753. Complete the [Clinical Supplies Requisition form](#) and fax to 312-793-0072. Call for more information about this service 217-785-8101.

Submission Form: Newborn Screening Submission Form

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, shipped cold on ice packs, and received within 7 days from collection. 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:	Specimen other than stool; Improperly completed test request; No patient identifier on specimen; broken or leaking specimen; specimen shipped at improper temperature; specimen received greater than 7 days from collection.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	3 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
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: *Variola*, *Vaccinia*, 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 of origin with a low to moderate risk of having contracted *Variola* 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](#).

Specimen Type	Room Temp	2° C to 8° C	-20° C to -70° C
Vesicle/Pustule skin or crust	NO	YES (up to 24 hours)	YES
Slide of fluid	YES	YES (up to 24 hours)	NO
Swab of lesion fluid	NO	YES (up to 24 hours)	YES
Punch Biopsy (no formalin)	NO	YES (up to 24 hours)	YES
Ocular impression (slide)	YES	YES (up to 24 hours)	NO
Swab of ocular site	NO	YES (up to 24 hours)	YES
Serum-gold top/SST	NO	YES (up to 24 hours)	YES (if aliquoted)

All specimen tubes must be labeled with at least the patient name. Ship the specimens as soon as possible after collection. Follow storage conditions listed in the table above.

- Rejection Criteria:** Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.
- Authorization:** No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection.
- Turn Around Time:** 1-2 days
- Ship to:** [Carbondale, Chicago, or Springfield IDPH Lab](#)
- 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 4 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 <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. 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 a test request 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 IDPH's Springfield laboratory for confirmation of malaria.
Turn Around Time:	2 days
Ship to:	Springfield IDPH Lab
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 IDPH 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.
Turn Around Time:	2 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Rabies Submission Form

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) Note: All testing performed at CDC.
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) collected in a gold top/serum separator tube (SST). <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 IDPH 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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	7 days for the MAC- ELISA assay 14 days for viral neutralization confirmation if necessary
Ship to:	Chicago IDPH Lab
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 IDPH 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.
Turn Around Time:	7 days
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.
Ship to:	Chicago or Springfield IDPH Lab
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 IDPH 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.
Turn Around Time:	7 days
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.
Ship to:	Chicago or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Disease Test Requisition Form

Syphilis (*Treponema pallidum*)

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 obtained 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 5 mL blood in a gold top/serum separator tube (SST). 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 5 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 5 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 IDPH; Office of Health Protection; STD Section at 217-782-2747. A provider number will be given which should be included on the submission form.
Turn Around Time:	2 for EIA screening; 3-5 days for additional tests
Ship to:	Carbondale IDPH Lab
Shipping Kits:	Call the Springfield IDPH Lab at 217-782-6562
Submission Form:	HIV/STD Submission Form

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 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:	<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">Roof or crust of vesicleSwab (Dacron or rayon) of vesicleDried vesicular fluid on a slide (touch prep)Fresh biopsy (no formalin)Dry or wet swab of lesion. Dry swab preferred for PCRViral cell culture lysate (only when non-variola orthopox virus 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.</p>
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	1-2 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Communicable Disease Test Requisition Form

Variola virus (Smallpox), Molecular

Test Name: Detection of variola virus (potential biothreat agent)

Method Name: Real time polymerase chain reaction
Note: All testing performed at CDC.

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: Evaluation of patients for potential Orthopox infection/testing is based on the [Acute, Generalized Vesicular or Pustular Rash Illness Protocol](#).

Acceptable specimens include:

Specimen Type	Room Temp	2° C to 8° C	-20° C to -70° C
Vesicle/Pustule skin or crust	NO	YES (up to 24 hours)	YES
Slide of fluid	YES	YES (up to 24 hours)	NO
Swab of lesion fluid	NO	YES (up to 24 hours)	YES
Punch Biopsy (no formalin)	NO	YES (up to 24 hours)	YES
Ocular impression (slide)	YES	YES (up to 24 hours)	NO
Swab of ocular site	NO	YES (up to 24 hours)	YES
Serum-gold top/SST	NO	YES (up to 24 hours)	YES (if aliquoted)

All specimen tubes must be labeled with at least the patient name. Ship the specimens as soon as possible after collection. Follow storage conditions listed in the table above. Environmental sample testing is also available through special arrangement. Please contact the Division of Labs if environmental testing is requested.

Rejection Criteria: Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube; calcium alginate swab specimens.

Authorization: No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.

Turn Around Time: 1-2 days

Ship to: [Carbondale, Chicago, or Springfield IDPH Lab](#)

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

Vibrio spp.

Test Name:	Isolation and identification of <i>Vibrio spp.</i>
Method Name:	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 IDPH 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.
Turn Around Time:	7 days
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.
Ship to:	Chicago or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Disease 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 linked 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: <ul style="list-style-type: none">a. Acute phase and convalescent phase sera (0.5 ml minimum volume of each required) collected in a gold top/serum separator tube (SST). <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 IDPH 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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	4-6 weeks for CDC to perform the assay(s).
Ship to:	Chicago IDPH Lab
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>Note: If the test is negative and the isolate is the genus Yersinia, speciation will not be performed.</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 Labs if environmental testing is requested.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out test request form; no patient identifier on specimen; broken specimen tube.
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.
Turn Around Time:	Presumptive PCR: 1 day Culture confirmation: 4 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Communicable Disease Test Requisition Form

Yersinia sp.

Test Name:	Isolation and identification of <i>Yersinia spp.</i>
Method Name:	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 IDPH 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.
Turn Around Time:	7 days
Authorization:	No authorization number is required. Submission is required by Illinois Administrative Rule Part 690. Please notify your LHD if you suspect this infection. Clinical specimens should be discussed with a LHD.
Ship to:	Chicago or Springfield IDPH Lab
Shipping Kits:	Call the Springfield Laboratory at 217-782-6562
Submission Form:	Communicable Disease Test Requisition Form

Zika Virus-Molecular

Test Name:	Identification of Zika Virus in Acute Specimens
Method Name:	Triplex Real-Time, Reverse Transcriptase -Polymerase Chain Reaction (PCR)
Results:	Negative / Positive/Inconclusive for the identification of Zika Virus RNA
Reference Ranges:	Negative for the identification of Zika Viral RNA
Clinical Significance:	Human infections with Zika Virus cause a mild illness called “Zika Fever”, characterized by mild fever, macropapular rash, conjunctivitis, and arthralgia. The incubation period for infection is between two and seven days. Infection with Zika virus has recently been linked to cases of Guillain–Barré syndrome and other neurologic conditions. Infection of pregnant women has also been linked to reports of an increased number of microcephalic infants (microcephaly results when a baby’s brain has not developed properly during pregnancy). There are no vaccines or pharmaceuticals to treat Zika infection. Testing by EUA (Emergency Use Authorization) was approved by the Secretary of Health and Human Services on March 17, 2016.
Submission Criteria:	Acceptable specimens include: <ol style="list-style-type: none">Serum (Centrifuged to separate) collected in gold top/serum separator (SST)CSF (1 ml minimum volume required)Whole Blood, Urine and Amniotic Fluid (0.5 mL required with a patient matched serum specimen)Specimens must be transported on dry ice (preferred) or ice packs for receipt at the IDPH Laboratory within 72 hours of collection. If specimens need to be stored for more than 72 hours, but they must be frozen at -70°C. Frozen specimens must be shipped to the IDPH Laboratory on dry ice.
Rejection Criteria:	Specimens other than those detailed above; improperly filled out testing requisition forms; no patient identifier on specimen; broken specimen tube.
Authorization:	Prior approval from your LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	2 days
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Zika Virus-Serology

Test Name:	Identification of Zika Virus Infection
Method Name:	Detection of IgM antibodies to Zika virus using antibody capture enzyme linked immunosorbent assay (MAC-ELISA) Detection of Zika antibodies by viral neutralization in culture [PRNT] (reflex assay for Presumptive Positive/Equivocal/Inconclusive MAC-ELISA assay results) <i>Note: All confirmation tests are performed at the CDC</i>
Results:	Results for MAC-ELISA are Negative, Presumptive Positive, Equivocal, and Inconclusive
Reference Ranges:	Negative for the detection of Zika Virus antibodies
Clinical Significance:	Early detection helps in the clinical management and for the identification of Zika Virus outbreaks.
Submission Criteria:	Acceptable specimens: Acute phase sera (0.5 ml minimum volume of each required) collected in a gold top/serum separator tube (SST). Note: paired serum is required to resolve equivocal results. CSF (1 ml minimum volume required) All specimen tubes must be labeled with the patient name and date of birth. Ship the specimens with ice packs. Specimens must arrive at the IDPH within 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 LHD with an outbreak investigation number is required. For questions, please contact your LHD or the Communicable Disease Control Section of the IDPH at 217-782-2016.
Turn Around Time:	7 days for MAC-ELISA Allow 4-6 weeks for CDC confirmation assay.
Ship to:	Chicago IDPH Lab
Submission Form:	Arbovirus Test Requisition Form

Aerobic and Coliform Count in Dairy Products using Petri-film

Test Name: Aerobic and Coliform Count in Dairy Products

Method Name: Petri-film

Results: Reported as Petrifilm Aerobic Count (PAC) per 1ml or 1 gram and Petri-film Coliform Count per 1ml or 1 gram

Reference Ranges: Acceptable results are as follows:

	Grade A Finished Products	Grade B Finished Products	Grade A Raw Samples	Grade B Raw Samples
PAC	≤20,000	≤50,000	≤300,000	≤1,000,000 for cheese plants and ≤500,000 for ice cream plants
HSCC	≤10	≤20	N/A	N/A

Clinical Significance: High bacterial counts in dairy samples could indicate the presence of pathogenic bacteria. Pathogenic bacteria in dairy samples could lead to an outbreak of illness among consumers.

Submission Criteria: Samples collected for analysis must be refrigerated (0° to 4.5°C) at the time of collection. Samples received <3 hours from time of collection may be ≤7°C if the samples are cooler than when they were collected. Record the times and dates of sample collection for each set of samples. 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.

Rejection Criteria: Testing will not be performed if samples are not within the required temperature range (0° to 4.5°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 IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food, Drugs and Dairy, as part of the Grade A Milk Program.

Turn Around Time: 5 days

Ship to: [Carbondale, Chicago, or Springfield Lab](#)

Shipping Kits: No shipping kits are provided by IDPH laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.

Submission Form: Dairy Sample Submission Form

Alkaline Phosphatase in Dairy Samples

Test Name:	Alkaline Phosphatase in Dairy Samples
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° to 4.5°C) at the time of collection. Samples received <3 hours from time of collection may be ≤7°C if the samples are cooler than when they were collected. Record the times and dates of sample collection for each set of samples. 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.
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0° to 4.5°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 IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food and Dairy, as part of the Grade A Milk Program.
Turn Around Time:	5 days
Ship to:	Carbondale, Chicago, or Springfield Lab
Shipping Kits:	No shipping kits are provided by IDPH laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.
Submission Form:	Dairy Sample Submission Form

Total Coliform and E. coli Coliform in Water – Colilert

Test Name:	Determination of Total coliforms and <i>E. coli</i> in water
Method Name:	Colilert Presence/Absence, Quanti-Tray 51 & Quanti-Tray 2000
Results:	For Drinking Waters: Total coliform and E. coli Present or Not Found per 100 mL for P/A and Total coliform and E. coli count/100 mL for QT 51 and QT 2000 For Bathing Beaches: E. coli count/100 mL for QT 2000
Reference Range:	Total and E. coli 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. The presence of E. coli in bathing beaches can cause illness if ingested by bathers.
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 IDPH 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. Samples leaked or broken in transit. Samples containing an interfering substance.
Authorization:	Prior approval from the local health department or regional office is required.
Turn Around Time:	3 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Shipping Kits:	Call Springfield IDPH Lab at 217-782-6562
Submission Form:	Use IDPH approved water submission form appropriate for sample type

***E. coli* O157:H7 and Shiga Toxin Producing *E. coli* (STEC)
in Food and Environmental Swabs/Sponges**

Test Name:	<i>E. coli</i> O157:H7 in Food and Environmental Swabs/Sponges
Method Name:	PCR Method for STEC, BioMerieux VIDAS Method for <i>E. coli</i> O157:H7 or Cultural Method for <i>E. coli</i> O157:H7 (cultural method performed only if PCR and/or VIDAS instrument and/or reagents are not available)
Results:	Reported as detected or not detected.
Reference Ranges:	<i>E. coli</i> O157:H7 or Shiga Toxin Producing <i>E. coli</i> not detected.
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>E. coli</i> O157:H7 or STEC.
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. Environmental swab/sponge samples are to be kept cool until testing can be performed. They can be sent in the same cooler as food samples if both are being submitted. 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 IDPH 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 IDPH laboratory should be contacted with the method of shipment and the expected time of arrival.
Turn Around Time:	7 days
Ship to:	Springfield IDPH Lab
Shipping Kits:	Foodborne Illness Kit: Supplies included in this kit are provided by IDPH Division of Laboratories. To submit order: Telephone 217 782-6562. Fax 217 524-7924 or mail Springfield IDPH Lab .
Submission Form:	Sample Cover Sheet and Food Investigation 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 IDPH laboratory is accredited for Paint, Soil; Dust Wipe and Air Filter matrixes by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP, LLC) 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 AIHA-LAP, LLC) 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 by laboratory.
Authorization:	Paint Chips, Dust wipes, soil samples, Air Filter, and "Other" samples will be accepted only from IDPH Division of Environmental Health or LHD.
Turn Around Time:	1-5 days
Ship to:	Chicago IDPH Lab
Shipping Kits:	Call Chicago Chemistry Laboratory at 312-793-3053
Submission Form:	Lead Sample Submission Form

Inhibitory Substances in Dairy Samples – Charm

Test Name:	Inhibitory Substances in Dairy Samples
Method Name:	Charm SL-3
Results:	Reported as positive for Beta-lactam or Beta-lactam not found.
Reference Ranges:	Beta-lactam not found
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° to 4.5°C) at the time of collection. Samples received <3 hours from time of collection may be ≤7°C if the samples are cooler than when they were collected. Record the times and dates of sample collection for each set of samples. 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.
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0° to 4.5°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 IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food, Drugs and Dairy, as part of the Grade A Milk Program.
Turn Around Time:	5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab.
Shipping Kits:	No shipping kits are provided by IDPH laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.
Submission Form:	Dairy Sample Submission Form

Inhibitory Substances in Dairy Samples – Delvotest

Test Name:	Inhibitory Substances in Dairy Samples
Method Name:	Delvotest P 5-Pack
Results:	Reported as positive or not found.
Reference Ranges:	Beta-lactam not found
Clinical Significance:	To detect the presence of 4 of 6 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° to 4.5°C) at the time of collection. Samples received <3 hours from time of collection may be ≤7°C if the samples are cooler than when they were collected. Record the times and dates of sample collection for each set of samples. 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.
Rejection Criteria:	Testing will not be performed if samples are not within the required temperature range (0° to 4.5°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 IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food, Drugs and Dairy, as part of the Grade A Milk Program.
Turn Around Time:	5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Shipping Kits:	No shipping kits are provided by IDPH laboratory. Milk sanitarians transport samples in coolers provided by their own regional offices.
Submission Form:	Dairy Sample Submission Form

***Legionella pneumophila* in Water - Legiolert**

Test Name:	Determination of <i>Legionella pneumophila</i> in water
Method Name:	Legiolert
Results:	Legiolert test detects <i>Legionella pneumophila</i> at ≥ 10 organisms/100mL when using potable water and <i>Legionella pneumophila</i> at ≥ 10 organisms/mL (≥ 1000 organism/100 mL) when testing non-potable water
Reference Range:	<i>Legionella pneumophila</i> Not Detected
Clinical Significance:	<i>Legionella</i> is commonly found in environmental sources, typically in man-made warm water systems. The mode of transmission from these reservoirs is aerosolization, aspiration or direct inoculation into the airway. Direct person-to-person transmission does not occur. The spectrum of illness caused by <i>Legionella</i> species ranges from a mild, self-limited flu-like illness (Pontiac fever) to a disseminated and often fatal disease characterized by pneumonia and respiratory failure (Legionnaires disease). Risk factors include smoking, chronic lung disease, and immunosuppression.
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 IDPH 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. Samples leaked or broken in transit. Samples containing an interfering substance.
Authorization:	Prior approval from the local health department or regional office is required.
Turn Around Time:	3 days
Ship to:	Springfield IDPH Lab
Shipping Kits:	Call Springfield IDPH Lab at 217-782-6562
Submission Form:	Use IDPH approved water submission form appropriate for sample type.

***Listeria* species in Food and Environmental Swab/Sponge Samples**

Test Name:	<i>Listeria</i> species in Food and Environmental Swab/Sponge Samples
Method Name:	PCR Method, BioMerieux VIDAS Method or Cultural Method (cultural method performed only if PCR and/or VIDAS instrument and/or reagents are not available)
Results:	Reported as <i>Listeria monocytogenes</i> detected or not detected. Also, if another <i>Listeria</i> species is found, it is reported as <i>Listeria</i> species detected. Species detected will be specified.
Reference Ranges:	<i>Listeria</i> species not detected
Clinical Significance:	Early detection allows for effective clinical management and identification of a possible outbreak of <i>Listeria monocytogenes</i> or other <i>Listeria</i> spp.
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. Environmental swab/sponge samples are to be kept cool until testing can be performed. They can be sent in the same cooler as food samples if both are being submitted. 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 and environmental swab/sponge samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of IDPH Infectious Disease Division and/or the Food, Drugs and Dairy Division to receive assistance in determining the necessity of testing samples for <i>Listeria</i> . After it is determined by the Division of Infectious Disease and/or the Division of Food, Drugs and Dairy that testing is necessary, the IDPH laboratory should be contacted with the method of shipment and the expected time of arrival.
Turn Around Time:	7 days
Ship to:	Springfield IDPH Lab
Shipping Kits:	Foodborne Illness Kit: Supplies included in this kit are provided by IDPH Division of Laboratories. To submit order: Telephone 217 782-6562. Fax 217 524-7924 or mail to Springfield IDPH Lab .
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Residual Bacterial Count in Milk Container

Test Name:	Residual Bacterial Count in Milk Containers
Method Name:	Petri-film
Results:	Reported as a Petri-film Aerobic Count (PAC) per container and Petri-film Coliform Count per container
Reference Ranges:	0 cfu's in milk container
Clinical Significance:	The detection of bacteria in the pasteurized milk container indicates a failure to sterilize containers by the dairy facility.
Submission Criteria:	Milk containers are received at room temperature with the lids securely in place.
Rejection Criteria:	Containers with no lids or cracked containers.
Authorization:	Milk containers are accepted from milk sanitarians employed by the IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food, Drugs, and Dairy, as part of the Grade A Milk Program.
Turn Around Time:	5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab.
Shipping Kits:	No shipping kits are provided by IDPH laboratory. Milk sanitarians transport containers at room temperature.
Submission Form:	Dairy Sample Submission Form

***Ricin communis* (ricin) Toxin**

Test Name:	Identification Ricin Toxin
Method Name:	Time-Resolved Fluorescence Immunoassay (TRF) for Ricin Toxin
Results:	Ricin Toxin
Reference Ranges:	Negative or Reactive for Ricin Toxin
Clinical Significance:	<p>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.</p>
Submission Criteria:	<p>Acceptable specimens include:</p> <ul style="list-style-type: none">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, CST, or other designated law enforcement.
Authorization:	No authorization number is required. Please notify your LHD if you suspect this infection.
Turn Around Time:	2 days for TRF
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Submission Form:	Threat Agent Laboratory Test Requisition (also serves as a chain of custody form).

Salmonella in Food and Environmental Swab/Sponge Samples

Test Name:	Salmonella in Food and Environmental Swab/Sponge Samples
Method Name:	PCR Method, BioMerieux VIDAS Method or Cultural Method (cultural method performed only if PCR and/or VIDAS instrument and/or reagents are not available)
Results:	Reported as detected or not detected.
Reference Ranges:	<i>Salmonella species</i> not detected
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. Environmental swab/sponge samples are to be kept cool until testing can be performed. They can be sent in the same cooler as food samples if both are being submitted. 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 and environmental swab/sponge samples are accepted only from regional, county, or city sanitarian personnel. The sanitarian contacts the epidemiologist of IDPH Infectious Disease Division and/or the Food, Drugs and Dairy Division to receive assistance in determining the necessity of testing samples for <i>Salmonella species</i> . After it is determined by the Division of Infectious Disease and/or the Division of Food, Drugs and Dairy that testing is necessary, the IDPH laboratory should be contacted with the method of shipment and the expected time of arrival.
Turn Around Time:	7 days
Ship to:	Springfield IDPH Lab
Shipping Kits:	Foodborne Illness Kit: Supplies included in this kit are provided by IDPH Division of Laboratories. To submit order: Telephone 217 782-6562. Fax 217 524-7924 or mail Springfield IDPH Lab .
Submission Form:	Sample Cover Sheet and Food Investigation Submission Form

Total Coliform in Dairy Water – MTF

Test Name:	Determination of Total coliform in Dairy Glycol Water
Method Name:	Multiple Tube Fermentation (MTF)
Results:	Reported as Total coliform <1 not found /100 ml or ≥1 present /100ml
Reference Range:	Total coliform <1 not found
Clinical Significance:	Detection of coliform bacteria in glycol 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. Samples must be submitted within 30 hours of collection.
Rejection Criteria:	Samples received more than 30 hours after collection. Samples received without a complete test requisition. No date and time of collection. Samples leaking or broken in transit. Samples containing an interfering substance.
Authorization:	Dairy glycol water samples are accepted from milk sanitarians employed by the IDPH regional offices. Testing requirements and frequency of testing are determined by the FDA and monitored by the IDPH Division of Food, Drugs and Dairy, as part of the Grade A Milk Program.
Turn Around Time:	5 days
Ship to:	Carbondale, Chicago, or Springfield IDPH Lab
Shipping Kits:	Call Springfield IDPH Lab at 217-782-6562
Submission Form:	Dairy Water Sample Submission Form