

**Delaware Public Health Laboratory
Combined
Laboratory Specimen Collection Procedures
And Bioterrorism Agents**

TEST	ORGANISM	TYPE OF SPECIMEN	METHOD	TRANSPORT MEDIUM AND TYPE OF CONTAINER	INSTRUCTIONS FOR TRANSPORT	PROCESSING TIME	OTHER
Acid Fast Bacilli (AFB) smear and culture	<i>Mycobacterium tuberculosis</i> complex	Respiratory, tissue, sterile fluids, and stool	Smear: Fluorescent Stain Culture: Conventional and liquid culture	Sterile leak proof container	Refrigerate (2-8° C), deliver to lab within 72 hours	4-6 weeks	Genetic analysis for other significant Mycobacteria Susceptibility for SIRE-PZA
AFB-M TB PCR	<i>Mycobacterium tuberculosis</i> and avium complex	Respiratory (sputum, BAL, etc.)	Real-time PCR	Sterile leak proof container	Refrigerate (2-8° C), deliver to lab within 72 hours	48 hours from receipt	For high risk for TB clients
Arboviruses	WNV, SLE	Serum, CSF	Microsphere Immunoassay (/Serologic IgM	Sterile leak proof container	Refrigerate (2-8° C), deliver to lab within 72 hours.	PCR 2-3 work days	Only accept bird organs submitted by DNREC or Tri-State bird rescue
	WNV, EEE	Bird brain, kidney, or other organs	Real-time RT-PCR				
	WNV, EEE	Chicken Blood (sentinel monitoring program)	EIA-IgM				
	Chikungunya Dengue	Serum	Real time PCR				
	Zika	Serum, urine, amniotic fluid, CSF	ELISA IgM			5 work days	Only accept chicken bloods submitted by DNREC Contact Epidemiology at 744-4541 for approval. Method dependent on travel history.
Carbapenemase Resistant Organism	Enterobacteriaceae or <i>Pseudomonas aeruginosa</i>	Pure isolate	mCIM AST Real time PCR	Agar slant or plate	Refrigerate (2-8° C) or Room temp	2-3 working days	
Bio-Terrorism agents		SEE	SEPARATE	CHART	BELOW		Call DPH Lab at 223-1520.

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Food	Shiga-toxin <i>E. coli</i> <i>Listeria</i> <i>Salmonella</i> <i>Shigella</i> <i>Staph. aureus</i> BT agents	Food	Culture for organism Real-time PCR or toxin testing	Sterile leak proof container (25-100 grams)	Refrigerate (2-8° C), deliver to lab within 72 hours	5-6 work days	Contact Epidemiology at 744-4541 for prior approval. Must specify target organism on lab slip.
Gonorrhea Culture	<i>Neisseria gonorrhoeae</i>	Swab of endocervical, urethral, oropharynx or rectum	Culture for organism	Direct specimen or agar slant or plate	Place in CO ₂ container, store in an incubator at 35°C and transport within 24 hours.	2-3 work days	Specimens must be received within 1 day of collection
Hepatitis C	HCV	serum	Antibody	Serum/SST	Refrigerate (2-8° C) immediately, deliver to the lab within 72 hours	2-3 work days	
Herpes Simplex Virus	HSV Virus	Swab of vesicle, genital lesion, conjunctiva, throat	Culture for virus	Viral Transport Media (VTM)	Refrigerate (2-8° C) immediately: deliver as soon as possible	2-10 work days	Hold for 10 days if negative
Human Immunodeficiency Virus (HIV 1/2)	Retrovirus	Serum	4 th Generation Ag/AB EIA HIV 1/2 Confirmation	Sterile leak proof container or serum separator tube	Refrigerate (2-8° C), deliver to lab within 5 calendar days	2-5 work days	Confirmation testing by Geenius
Miscellaneous culture	Pathogenic organisms Medical Examiner/Autopsy specimens	Sputum, tissues, body fluids Swab of site to be cultured (i.e. eye, endocervical)	Culture for organism	Culturette with transport media in tube or sterile container	Refrigerate (2-8° C), deliver to lab within 72 hours	2-3 work days	Blood and anaerobic cultures not performed Hold ME 5 days
Mumps and/or Measles	Mumps/.Measles Virus	Naso-pharyngeal /buccal swab	Real-time PCR	NP swab in Viral Transport Media (VTM) or urine	Refrigerate (2-8° C), deliver to lab within 72 hours	2-3 work days	Contact Epidemiology at 744-4541 for prior Approval.
Norovirus	Noroviruses (GI and GII)	Stool or vomit	Real-time RT- PCR	Sterile container	Refrigerate (2-8° C) immediately, deliver to the lab within 72 hours	2-3 work days	Contact Epidemiology at 744-4541 for prior Approval.

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Nucleic Acid Amplification Tests for STD	<i>Neisseria gonorrhoeae</i> , <i>Chlamydia trachomatis</i> , & <i>Trichomonas vaginalis</i>	Swab from oral, rectal, vaginal, endocervical or urethral Urine	TMA Aptima	Hologic collection kit for swab or urine	Refrigerate (2-8° C) or Room temp	Hologic APTIMA collection kit for swab or urine	Transfer urine to collection tube
Bordetella species	<i>Bordetella pertussis</i> , <i>holmseii</i> , or <i>parapertussis</i>	Naso-pharyngeal Swab (keep dry)	Real-time PCR	NP Swab, dry	Refrigerate (2-8° C), deliver to lab within 72 hours	2-3 work days	Contact Epidemiology for prior approval
PFGE (Pulsed-field Gel Electrophoresis)	<i>Salmonella</i> , <i>Shigella</i> , Shiga-toxin <i>E. coli</i> , <i>Listeria monocytogenes</i>	Grown culture	Gel Electrophoresis	Direct specimens or agar slant/plate	Refrigerate (2-8° C) or Room temp	4-10 work days	Patterns are uploaded to the CDC database
Quantiferon In-Tube	Antibodies to MTB Complex	serum	Interferon Gamma Release Assays	Three antigen coated tubes from vendor	Refrigerate (2-8° C) or Room temp	4-6 work days	Tubes must be incubated for at least 16 hours at 35°C ambient air
Rabies	Rabies Virus	Mammal brain, must contain brain stem and cerebellum	Fluorescent antibody (FA)	Double bagged or sealed container	Refrigerate (2-8° C), deliver to lab within 72 hours	1-2 work day	Do not freeze! Must have human contact to test.
Serotyping	<i>Salmonella spp.</i> , <i>Shigella spp.</i> , Shiga toxin <i>E. coli</i> , <i>Vibrio cholerae</i>	Grown culture Top 6 "O" groups for non-O157 <i>E. coli</i>	Slide and tube agglutination	Direct specimens or agar slant/plate	Refrigerate (2-8C) or Room temp	4-10 work days	<i>H. influenzae</i> , <i>N. meningitides</i> , <i>S. pneumoniae</i> sent to Regional lab
Sequencing	Bacteria or Virus	Pure isolate	Targeted or Whole Genome	Agar plate or slant	Refrigerate (2-8° C) or Room temp	4-10 work days	direct specimen in future (clinical or environmental)
Stool Culture	<i>Campylobacter</i> , <i>Salmonella</i> , <i>Shigella</i> , Shiga-toxin <i>E. coli</i> , and other enteric pathogens	Stool or rectal swab	Culture for organism Real-time PCR	Cary-Blair or transport media: One marble sized piece or one tablespoon	Refrigerate (2-8° C), deliver to lab within 72 hours	3-4 work days	Other organisms must be requested on the lab slip if desired

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Syphilis Serology							
RPR (Rapid Plasma Reagin)	<i>Treponema pallidum</i>	Serum	Nontreponemal antigen			3-5 work days	
TPPA (Treponemal Pallidum Particle Agglutination)	<i>Treponema pallidum</i>	Serum	Treponemal antigen	Serum/sterile container	Refrigerate (2-8° C), Deliver within 5 calendar days of collection	3-5 work days	
VDRL (Venereal Disease Research Laboratory)	<i>Treponema pallidum</i>	CSF	Nontreponemal antigen			5 work days	Test performed on CSF only
VZV	<i>Varicella Zoster Virus</i>	Swab of vesicle or lesion	Real time PCR	Dry swab	Refrigerate (2-8° C), deliver to lab within 72 hours	2-3 work days	
Throat culture	<i>Beta Strep or significant organisms</i>	Swab of throat	Culture for organism	Culturette with transport media in tube	Refrigerate (2-8° C), deliver to lab within 72 hours	1-2 work days	
Urine culture	Pathogenic bacteria	Clean catch urine	Culture for organism	Sterile container	Refrigerate (2-8° C), deliver to lab within 72 hours	2-3 work days	
Viral Culture	HSV (Herpes Simplex) Enteroviruses (Coxsackie B, Echovirus specified)	Vesicle, lesion, conjunctiva, respiratory, urine, etc.	Tube culture for virus	Viral Transport Media (VTM)	Refrigerate (2-8° C), deliver to lab within 72 hours	Up to 1 month	
Virus Stool	Enteroviruses (Coxsackie B, Echovirus specified) Norovirus	Stool: One marble sized piece or one tablespoon is sufficient for all tests. Stool or vomit	Culture for virus Real-time RT-PCR	Viral Transport Media (VTM) Sterile container	Refrigerate (2-8° C) immediately: deliver on wet ice within a few hours of collection Refrigerate (2-8° C) immediately: deliver on wet ice	4-10 work days 2-3 work days	Contact Epidemiology at 744-4541 for prior arrangement.

TEST	ORGANISM	TYPE OF SPECIMEN	METHOD	TRANSPORT MEDIUM AND TYPE OF CONTAINER	INSTRUCTIONS FOR TRANSPORT	PROCESSING TIME	OTHER
Viral Respiratory	Enteroviruses	Swab of throat or nasopharynx, nasal washing, bronchial washing	Culture for virus	Viral Transport Media (VTM)	Refrigerate (2-8° C) immediately; deliver on wet ice within a few hours of collection	4-10 work days Confirmatory testing may take 20 work days or longer	Sample must be flu A or B + to type
	Influenza A and B, Influenza A subtyping; Influenza B genotyping	All respiratory specimens acceptable, including tissue	Real-time RT-PCR	Viral Transport Media (VTM)	Refrigerate, deliver to lab within 72 hours	2-3 work days	
	Parainfluenza 1,2,and 3 Adenovirus Respiratory Syncytial Virus (RSV) 1 and 2	All respiratory specimens	Shell Vials	Respiratory in VTM	Refrigerate (2-8°C)	2-3 work days	
Viral Respiratory Panel	Influenza A, Influenza A subtype H1, Influenza A subtype H3, Influenza B, Respiratory Syncytial Virus (RSV), Human Metapneumovirus (hMPV), Rhinovirus/Enterovirus, and Adenovirus.	All respiratory specimens	GenMark eSensor RVP	Viral Transport Media (VTM)	Refrigerate (2-8°C)	2-3 work days	Contact Epidemiology for prior approval
Viral – Cytomegalovirus	CMV Virus	Urine, Amniotic fluid, Vitreous humor	CMV specific shell vials	Viral Transport Media (VTM)	Refrigerate (2-8° C) immediately; deliver to lab within 72 hours	5 work days	
Wound culture	Pathogenic bacteria	Swab of site Specify area of body	Culture for bacteria	Culturette or sterile container	Refrigerate, deliver to lab within 72 hours	2-3 work days	Specify if looking for specific bacteria (i.e. MRSA)

**Division of Public Health Laboratory
Bioterrorism Laboratory Specimen Collection Procedures**

DISEASE OR AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Anthrax <i>Bacillus anthracis</i>	Clinical-*	Lesion- collect liquid or material under scab	qPCR on original specimen.	clean, sterile, leak proof container or 2 dacron swabs at room temp	8-24 hrs.	Biopsy in 10% formalin for histochemical stain tested at CDC
		Blood: whole blood/plasma (EDTA, purple-top tube) or serum (red/black top tube)	qPCR: on original specimen.	Refrigerate at 2-8°C	8 -24 hrs	Blood cultures cannot be incubated at DPHL May require Chain of Custody
		Bacterial Isolates* –From respiratory specimens, pleural fluid, aspirates, tissue, ascites, CSF, stool, Blood, Etc.	Culture rule out	Grown isolate on agar plate sent at room temp	24-72 hrs	Sputum & stool have minimal recovery
			qPCR: on original specimens	Refrigerate at 2-8°C	8-24 hrs.	May require Chain of Custody
	Environmental and Non-Clinical	Swabs, Powder, Wipe, Letter, Seed or Plant Material: half pea size	Culture	Dacron or polyester swabs or sterile leak proof container	24-72 hrs	Chain of Custody required
			qPCR on original specimen	Dacron or polyester swabs or sterile leak proof container	8-24 hrs.	
	Food	Notification of DPHL by DPH Epidemiology Section is necessary as soon as possible due to the large amount of media necessary	Culture and qPCR Collect large representative sample (25 g).	Refrigerated samples & those collected at room temperature should be transported at 2-8°C. Transport frozen samples on dry ice.	2-5 days	

*Cultures from clinical specimens should be performed by the sentinel laboratory

DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS	
Brucellosis <i>Brucella melitensis</i> <i>Brucella abortus</i> <i>Brucella suis</i> <i>Brucella canis</i>	Clinical *	Bacterial Isolates* -from body fluids or tissues. Bone marrow,Blood, spleen, liver, abscesses, CSF, joint fluid, lymph nodes, etc.	Culture*: rule-out and confirmation	Grown isolate on agar plate sent at room temp	5-10 days	qPCR: requires culture confirmation Blood culture cannot be performed at DPHL May require Chain of Custody	
			qPCR: on grown organism only.	Grown isolate on agar plate sent at room temp	8-24 hrs.		
		Blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)	qPCR: available on original specimen.	Refrigerate at 2-8°C	8-24 hrs.		
		Blood: serum (red/black top tube) acute and convalescent specimens	Brucella Microagglutination Test (BMAT) done at CDC	Refrigerate at 2-8°C	Will need to be sent to CDC		
	Environmental and Non-Clinical	Swabs, Powder, letter Seed or Plant Material: half pea size sample in a sterile sealed bag or sterile tube.	Culture	Use Dacron or polyester swabs or a culturette	5-10 days		Chain of Custody required qPCR: requires culture confirmation
			qPCR on original specimen and grown organisms.	Use Dacron or polyester swabs, no culturettes	8-24 hrs.		
	Food	Milk and Cheese Notification of DPHL by DPH Epidemiology Section is necessary as soon as possible due to the large amount of media necessary to process food.	Culture and qPCR: available PCR on TSB enrichments Send all suspect food double bagged in a sterile, leak proof container. Attempt to collect at least 25 grams.	Refrigerated samples & those collected at room temperature should be transported at 4C. Frozen samples should be transported on dry ice.	5-10 days		

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DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Glanders <i>Burkholderia mallei</i> Meliodosis <i>Burkholderia pseudomallei</i>	Clinical*	Bacterial Isolates* - From blood, abscess, urine, tissue aspirates, sputum, etc.	Culture*: rule-out and confirmation on grown organism.	Grown isolate on agar plate sent at room temp	4-7 days	qPCR requires culture confirmation Blood culture cannot be performed at DPHL May require Chain of Custody
			qPCR** on grown organism only.	Grown isolate on agar plate sent at room temp	8-24 hrs.	
		Bone marrow, blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)	qPCR** on original specimen.	Refrigerate at 2-8°C	8-24 hrs.	
	Environmental and Non-Clinical	Swabs, Powder, letter Seed or Plant Material: half pea size	Culture.	Use Dacron or polyester swabs or sterile leak proof container	4-7 days	
			qPCR** on original specimen and grown organisms.	Use Dacron or polyester swabs, no culturettes	8-24 hrs.	
Food	No method available at DPHL or CDC					

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** qPCR detects both *Burkholderia mallei* and *Burkholderia pseudomallei*. Culture /biochemical tests are used in conjunction with qPCR to differentiate between species.

DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Q fever <i>Coxiella burnetii</i>	Clinical	Blood (EDTA) collected in acute phase before antibiotic therapy, whole blood or serum	qPCR only	Refrigerate at 2-8°C	8-24 hrs.	May require Chain of Custody Blood culture cannot be performed at DPHL
	Environmental	Powder, letter, wildlife/aquatic life/livestock specimens, etc	qPCR: available on original specimen	Use Dacron or polyester swabs, no culturettes or sterile leak proof containers	8-24 hrs.	Chain of Custody required qPCR requires confirmation by CDC
	Food	No method available at DPHL or CDC				

DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Novel Coronavirus 2012 Middle Eastern Respiratory Syndrome-Coronavirus (MERS-CoV)	Clinical	Respiratory: Nasopharyngeal, Oropharyngeal swabs, Aspirates, washes, Sputum in a clean, sterile, leak proof container.	qPCR	Specimens should be stored at 2-8°C for up to 72 hours after collection. If longer, freeze at -70 or below.	8-24 hrs.	Submitter must contact DPH Department of Epidemiology before sending samples
		Blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)	qPCR: available on original specimen.	Refrigerate at 2-8°C	8-24 hrs.	Submitter must contact DPH Department of Epidemiology before sending samples
	Environmental Food	No Method available at DPHL or CDC				

See CDC webpage for more info

DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Ricin toxin Ricinine biomarker determination	Clinical	Urine: Collect minimum 25-50mL in plastic urine specimen cup with o-ring.	LC/MS/MS: available at CDC	Freeze at -20 to -80°C following IATA PI 650 & CDC Chemical Exposure Guidelines	12-36 hrs	*Method available through LRN network
Ricin toxin Ricin toxin is detected using the TRF method	Environmental	Swabs, Powder (cotton, polyester, Dacron, rayon, or foam). Wipes (non-cotton gauze, polyester blend, Handi-Wipes"). Plant material in an envelope, paper, powder, water, soil (2.0±0.1g).	Time-resolved fluorescence assay (TRF): available.	Place into a leak proof, sealed, non-glass transport device. Transport at room temperature.	8-24 hrs	*Do not collect samples in containers made of glass. If possible avoid collection from any glass surface. Chain of Custody required
	Food	Food, drink: collect 2.0±0.1g, place in sterile, leak proof, plastic container. NO GLASS CONTAINERS.	Time-resolved fluorescence assay (TRF): available.	Place into a leak proof, sealed, non-glass transport device. Refrigerate at 2-8°C.	8-24 hrs	*Do not collect samples in containers made of glass. If possible avoid collection from any glass surface. Chain of Custody required

DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Tularemia <i>Francisella tularensis</i>	Clinical*	Bacterial Isolates* - From respiratory specimens, bronchial/tracheal wash, sputum, throat, lesions, tissue	Culture*: rule-out and confirmation on grown organism.	Grown isolate on agar plate sent at room temp	24-72 hrs	
			qPCR on grown organism only.	Grown isolate on agar plate sent at room temp	8-24 hrs.	qPCR: requires culture confirmation Sputum/throat-Minimal recovery -- not recommended
		Blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)	qPCR on original specimen.	Refrigerate at 2-8°C	8-24 hrs.	Blood culture cannot be performed at DPHL May require Chain of Custody
	Environmental	Swabs, Powder, Letter Seed or Plant Material: half peas size sample	Culture	Use Dacron or polyester swabs or a culturette or sterile leak proof container	2-7 days	Chain of Custody required qPCR: requires culture confirmation
			qPCR on original specimen and grown organisms.	Use Dacron or polyester swabs, no culturettes	8-24 hrs.	
	Food	Notification of DPHL by DPH Epidemiology Section is necessary as soon as possible due to the large amount of media necessary to process food.	Culture and qPCR Send all suspect food double bagged in a sterile, leak proof container. Attempt to collect at least 25 grams.	Refrigerated samples & those collected at room temperature should be transported at 4C. Transport frozen samples on dry ice.	2-7 days	Chain of Custody required qPCR: requires culture confirmation

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DISEASE AND AGENT	SPECIMEN SELECTION FROM SAMPLES		TEST METHOD	TRANSPORT MEDIUM/ INSTRUCTIONS	PROCESSING TIME	COMMENTS
Vaccinia virus "pox" type virus related to smallpox and is used to induce immunity against smallpox	Clinical	<p>Lesions -vesicular fluid, skin, scab, crust or roof of vesicle. Fresh biopsy of pustule or vesicle. Dry or wet swab of lesion. Viral cell culture lysate in a sterile, leak proof container</p> <p>(PERFORMED ONLY WHEN VACCINIA IS SUSPECTED, NOT SMALLPOX).</p>	qPCR	<p>Place in a sterile, leak proof, unbreakable container.</p> <p>Refrigerate at 2-8°C.</p>	12 hours from receipt of sample	<p>NOTES: These results are preliminary. Positive qPCR results must be confirmed by CDC.</p> <p>Clinical specimens may require Chain of Custody.</p>
Non Variola Orthopox (vaccinia, cowpox, monkeypox)	Environmental	<p>Powder, letter, etc.: Submit dry powders or substances in sterile non-glass container. At minimum, collect at least two non-cotton swabs and place in separate sterile non-glass container s.</p>	qPCR: available	<p>Do not use viral transport media</p> <p>Transport at room temperature.</p>	8-24 hrs	<p>NOTES: These results are preliminary. Positive qPCR results must be confirmed by CDC.</p> <p>Chain of Custody required</p>

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Chicken pox virus Varicella zoster virus (VZV) used as a rule-out test for low-moderate risk patients for possible smallpox	Clinical	<p>Lesions: vesicular fluid ,scabs, crust or roof of lesion in a sterile, leak proof container</p> <p>DRY SWAB IS PREFERRED.</p>	qPCR: available.	<p>Do not use viral transport media.</p> <p>Refrigerate at 2-8°C.</p>	8-24 hrs.	
		<p>Blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)</p>		<p>Refrigerate at 2-8°C.</p>		
	Environmental Food	<p>No method available at DPHL or CDC.</p>				

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Smallpox virus <i>Variola major</i> NOTE: Low risk patient testing only	Clinical					For patients in low and moderate risk categories according to the evaluation criteria in the CDC rash illness protocol DPHL can perform rule-out tests for Smallpox, which includes vaccinia, VZV (Varicella-zoster virus), and herpes simplex virus. Other methods can be conducted after RT-PCR R/O (cell culture, direct DFA, IFA). DO NOT ORDER THESE TESTS IF PATIENT FALLS INTO HIGH RISK CATEGORY. REFER TO THE SMALLPOX HIGH RISK CHART!!!!
		Autopsy specimens: Including portions of skin containing lesions, liver, kidney, etc., for virus isolation should be frozen in a sterile, leak proof container	Cell culture	Ship frozen on dry ice	4-10 days	
		Biopsy: Place dried vesicular fluid on a slide ("touch prep")	qPCR	Package in slide box, do not freeze.	12 hours from receipt of sample	
		Lesions, Vesicles or pustules: scabs, crust or roof of lesion in a sterile, leak proof container	Cell culture	Refrigerate at 2-8°C	4-10 days	
		Blood: whole blood (EDTA, purple-top tube) or serum (red/black top tube)	IFA test for detection of specific antibodies in serum	Refrigerate at 2-8°C	2-24 hours after initial set up	Clinical Specimens may require Chain of Custody.

***CDC Smallpox Draft Guide C, Part 1 Infection Control Measures for Healthcare and Community Settings, Guide F – Environmental Control of Smallpox Virus, <http://www.bt.cdc.gov/agent/smallpox/infection-control/>

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VHF Viral hemorrhagic fevers	Clinical					Biosafety Level 4 facilities should be used for testing for these viruses. DPHL does not have a BioSafety Level 4 Lab (Ebola testing is performed at DPHL) Clinical specimens may require Chain of Custody.
	Contact DPH Epidemiology and CDC EOC immediately for testing needs	Blood- whole blood (EDTA, purple-top tube) or serum (red/black top tube)	Ebola PCR can be performed at DPHL with Epidemiology approval Further testing can be done at CDC Proper PPE including gloves should be worn while collecting specimen	Decontaminate outside of tube, place in a double leak proof container	8-24 hrs.	

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Plague <i>Yersinia pestis</i>	Clinical*	Bacterial Isolates*-from Respiratory specimens- bronch wash, nasopharyngeal swabs, tissues, fluids	Culture*: rule-out and confirmation on grown organism.	Grown isolate on agar plate sent at room temp	24-72 hrs	May require Chain of Custody Sputum throat-Minimal recovery not recommended Blood culture cannot be performed at DPHL qPCR requires culture confirmation
			qPCR: on original specimen and grown organisms.	Refrigerate at 2-8°C	8-24 hrs	
	Environmental and Non- Clinical	Environmental swabs, letter, powder or liquids Seed or Plant Material: half pea size sample in a sterile sealed bag or sterile tube.	Culture	Use Dacron or polyester swabs or a culturette	4-7 days	Chain of Custody required qPCR requires culture confirmation
			qPCR: on original specimen and grown organisms.	Use Dacron or polyester swabs, no culturettes	8-24 hrs.	
	Food	Notification of DPHL by DPH Epidemiology Section is necessary as soon as possible due to the large amount of media necessary to process food.	Culture and qPCR Send all suspect food double bagged in a sterile leak proof container. Attempt to collect at least 25 grams.	Refrigerated samples & those collected at room temperature should be transported at 4°C. Frozen samples should be transported on dry ice.	2-7 days	

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