

Directory of Services

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Author
PHL

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Laboratory

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Approval Deputy Director - Emergency Approval 5/19/2021 1.1



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Approval Lab Director 3/24/2020 1.0



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Approval QA Officer 3/24/2020 1.0



Steven LaCroix

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Washington State Department of Health Public Health Laboratories



Directory of Services

Washington State Department of Health - Public Health Laboratories Directory of Services

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Department of Health Key Personnel Contact List

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Main FAX(206) 367-1790

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Public Health Microbiology

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Mail Room(206) 418-5579

Procurement(206) 418-5412

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Quality Assurance Officer

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Safety Officer*Heather Matthies*(206) 418-5524

Heather.Matthies@doh.wa.gov

Training Program Manager*Joseph Aharchi*(206) 418-5401

Joseph.Aharchi@doh.wa.gov

WA PHL Laboratory Units**Environmental Laboratory Sciences**

Water Bacteriology(206) 418-5489

Chemistry(206) 418-5492

Radiation Chemistry(206) 418-5494

Chemical Incident Response Lab.....(206) 418-5520
or (360) 789-6021

Biotoxins.....(206) 418-5443

Marine Water Bacteriology(206) 418-5443

Newborn Screening.....(206) 418-5537

Public Health Microbiology(206) 418-5447

ARLN.....(206) 418-5478

Emergency Response Team.....(206) 418-5562

Enteric Pathogens.....(206) 418-5456

Mycobacteriology (TB).....(206) 418-5473

Parasitology.....(206) 418-5469

Special Bacteriological Pathogens (Reference).....(206) 418-5452

Virology.....(206) 418-5458

Food Microbiology(206) 418-5591

Molecular Epidemiology(206) 418-5467

Covid-19 testing branch(206) 418-5572

NON-LABORATORY PROGRAMS AND FUNCTIONS

Located at the Washington Public Health Laboratories

Office of Epidemiology-Communicable Disease

(CD Epidemiology)

State Communicable Disease Epidemiologist*Scott Lindquist MD* (206) 418-5500

Scott.Lindquist@doh.wa.gov

Communicable Disease Epidemiology, Director of

Wayne Turnberg PhD (206) 418-5559

Wayne.Turnberg@doh.wa.gov

Emergency Response and Preparedness Supervisor

Mike Boysun(206) 418-5518

Mike.Boysun@doh.wa.gov

Administrative Assistant (24-hour line) (206) 418-5500

Toll free **(877) 539-4344**

Fax (206) 364-1060

Epi Center (SL3, Leslie Byerly) (206) 418-5602

Washington Electronic Disease Surveillance System

Steve Lin..... (206) 418-5526

Steve.Lin@doh.wa.gov

OTHER FREQUENTLY CALLED NUMBERS

State HIV AIDS Hot Line1-800-272-AIDS

Drinking Water Hot Line1-800-521-0323

FDA Seafood Hot Line1-800-FDA-4010

PSP/Domoic Acid 24-hour Information Line1-800-562-5632

Washington State Consumer Assistance Line (206) 753-2870

TOLL FREE**1-800-525-0127**

Washington State Basic Health Plan – Insurance1-800-773-9872

Radiological Emergencies(206) 682-5327

Important Department of Health Websites

DOH Website

<http://www.doh.wa.gov/Home.aspx>

DOH Public Health Laboratories Website

<http://www.doh.wa.gov/PublicHealthandHealthcareProviders/PublicHealthLaboratories.aspx>

DOH Community Food Safety Website

<http://www.doh.wa.gov/CommunityandEnvironment/Food.aspx>

DOH Drinking Water Program Website

<http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater.aspx>

DOH Recreational Shellfish Website

<http://www.doh.wa.gov/CommunityandEnvironment/Shellfish/RecreationalShellfish.aspx>

DOH NOTIFIABLE CONDITIONS

<http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/NotifiableConditions>

WASHINGTON STATE PUBLIC HEALTH LABORATORIES



GENERAL INFORMATION

Mission Statements

Department of Health Mission: *The Department of Health works to protect and improve the Health of People in Washington State.*

Public Health Laboratories Mission: *To provide a wide range of diagnostic and analytical functions for the assessment and surveillance of infectious/communicable, heritable/genetic and chronic diseases as well as environmental contamination. Improve the quality assurance and analytical performance of clinical and environmental laboratories through training and consultation as well as providing scientific and managerial leadership in developing public health policy.*

Public Health Laboratories Overview

History

The Washington State Public Health Laboratories (PHL) was established by the legislature in the early 1900's. The laboratories were first located in downtown Seattle in the Alaska Building. The Public Health Laboratories were moved to the Smith Tower Building and remained there until 1985. In 1982, work was begun on a new facility located just north of Seattle in the City of Shoreline. The PHL was relocated to its current building in 1985. The laboratories are named in honor of W.R. Giedt, who was the director of the PHL during this period of its greatest changes and growth from 1943 to 1971. Under his leadership, the PHL met significant challenges in clinical and environmental public health, and adopted new technologies as soon as they were proven reliable.

Since 2001 Dr. Romesh Gautam has been the Director of the State Public Health Laboratories. Under leadership of Dr. Gautam, the PHL has focused on the development and implementation of new genetic/DNA based technologies to provide scientific support and public health services focused on improving public health at local, state and national levels.

Our Clients

Primary users of the laboratories include preventive medicine programs at the state, county and federal level; hospitals; public health and medical laboratories seeking reference or consultation services; laboratories desiring certification; other agencies desiring public health laboratory services; and physicians seeking assistance in diagnosing rare or unusual diseases (botulism, rabies, diphtheria, etc.). In addition, programs and agencies concerned with environmental problems make extensive use of the laboratories.

Laboratory Services

The laboratories are engaged in activities designed to aid in the diagnosis, treatment, and prevention of communicable, chronic, congenital and genetic diseases; to assess the general health of the population; to help safeguard a healthful environment; and to assure high quality work within the health and environmental laboratory community. The laboratories provide diagnostic and follow-up services in the areas of newborn screening, food poisoning, surveillance studies of etiologic agents in the areas of bacteriology, virology, serology, parasitology, radiation chemistry, pesticide residue analysis, and many other disciplines. Training and consultation activities are also provided by the State Public Health Laboratories.

As the state's reference clinical laboratory, the PHL provides local health departments, hospitals, clinics and commercial laboratories with a wide range of services including identification and confirmation of unknown pathogenic organisms, consultation on laboratory methodology and training in current laboratory issues and techniques. As a provider of services to local, state and federal agencies, the PHL is often the focal point for coordinating investigations of infectious disease outbreaks and mediating the transfer of information between agencies. The staff at the PHL test clinical and environmental specimens/samples associated with known and potential disease outbreaks, and work with epidemiology, nursing and environmental health staff to identify possible sources for outbreaks. The PHL staff performs, testing for sexually transmitted diseases, food borne diseases, virus isolation and viral serology, mycobacteriology, environmental microbiology, enterics, parasitology, microbial identification, biotoxins, metals, inorganic chemistry, congenital diseases in newborns.

Response to Biological, Chemical and Radiological Terrorism

The PHL is participating in a national network called the Laboratory Response Network (LRN) initiated by the Centers for Disease Control and Prevention, Atlanta. The LRN is a collaborative approach between public and private laboratories and is focused heavily on improving laboratory-based bioterrorism and chemical

terrorism response capabilities in the United States. Hospital and private laboratories are most likely to be the first to receive patient specimens containing etiological agents used in a covert act of bioterrorism and laboratory professionals must be trained to identify microbial pathogens likely to be used for bioterrorism. Laboratorians must know how to safely collect, transport, and process specimens containing biological agents associated with bio-threat acts and specimens to be analyzed following chemical-threat attacks.

The PHL also participates in the Food Emergency Response Network (FERN), a joint effort of the US Food and Drug Administration Center for Food Safety and Applied Nutrition (USFDA CFSAN) and US Department of Agriculture Food Safety and Inspection Service (USDA FSIS). The FERN is focused on improving laboratory-based food testing response capacity and capability in the United States. The FERN has responsibility for developing and distributing rapid food testing methods.

The PulseNet Foodborne Disease Surveillance System

The Centers for Disease Control and Prevention (CDC) in Atlanta, Ga., in a cooperative effort with state/local public health agencies, other federal agencies and specialists in the private sector, have developed a food borne surveillance monitoring system known as PulseNet. PulseNet is an early warning system that allows participating state public health laboratories to share critical food borne disease surveillance information, effectively reducing the time needed to respond to regional and national outbreaks of food borne disease.

Outbreak Response

During 1996-1997, the Microbiology section began developing advanced molecular biology testing capabilities for bacterial and viral pathogens. The methodologies have allowed the PHL to improve the testing services offered to its customers and also to initiate new methods development. In 1997, the PHL implemented molecular testing for *Bordetella pertussis* by PCR and since then has continuously improved upon its capacity by bringing on molecular capabilities to most areas of the laboratory. The Public Health Microbiology staff has been directly involved in the investigation of sporadic cases and outbreaks related to *Escherichia coli* O157:H7, *Salmonella*, *Shigella*, *Campylobacter*, *Vibrio parahaemolyticus*, enterotoxigenic *E. coli*, methicillin-resistant *Staphylococcus aureus*, Vancomycin-resistant *Enterococcus*, *Norovirus*, rubeola, rubella, influenza, pertussis and most recently SARS-CoV-2, to name a few.

The team approach in microbiology and epidemiology has led to timely intervention for many outbreak investigations. In 1999, a unique cluster of 35 cases of *E. coli* O157:H7 was recognized through routine PFGE surveillance testing at the PHL. Patients linked to the cluster reported swimming in Battleground Lake in southwest Washington. Microbiologists from our Environmental section identified *E. coli* O157:H7 from cultures of lake sediment. This was the first documented report isolating *E. coli* O157:H7 from lake sediment and was shown to be identical to the human isolates. The PulseNet system showed that the outbreak was not a large multi-state problem, but a localized one. In 2007, the Microbiology laboratory played an instrumental part in determining the source of an outbreak of *Salmonella* in eastern Washington. The collaborative efforts of the PHL Enterics, PFGE and Food Microbiology laboratories with the Communicable Disease Epidemiology Section, the DOH Food Safety Program and local health jurisdiction investigators resulted in a national change to the type of meat slicer used by a popular restaurant chain.

In the several years the laboratory has seen outbreaks of *Listeria*, *E. coli* O157, and *Salmonella* in a variety of foods—artisan cheeses, raw milk, peanut butter, sprouts and pre-packaged products such as spices. State-of-the-art instrumentation and protocols which include whole genome sequencing, well-trained staff and collaborative efforts have assured a timely detection of these organisms in food products.

PHL Organization

The Washington State Department of Health is comprised of four offices. The W.R. Giedt Public Health Laboratories belong to the Division of Epidemiology, Health Statistics and Public Health Laboratories

(EHSPHL). The Public Health Laboratories (PHL) is physically located approximately 10 miles north of downtown Seattle in the City of Shoreline, Washington. The PHL are divided into four major offices, each of which report to the Laboratory Director, who in turn, reports to the Assistant Secretary for the EHSPHL Division. The offices that comprise the PHL are the Office of Environmental Laboratory Sciences, the Office of Newborn Screening, the Office of Public Health Microbiology and the Office of Laboratory Operations.

Office of Environmental Laboratory Sciences

The Office of Environmental Laboratory Sciences has approximately 30 technical staff members and is divided into two main sections: Environmental Microbiology and Environmental Chemistry and Radiation. This office is comprised of six units that include the Radiation Laboratory, Chemistry Laboratory, Environmental Microbiology Laboratory, Biotoxins Laboratory, Chemical Terrorism Response, and Radiological contamination of Food. These laboratory units provide a wide variety of testing of environmental samples and clinical specimens and are certified by several federal programs that include the EPA, FDA, College of American Pathologists and the Nuclear Regulatory Commission.

Office of Public Health Microbiology

The Office of Public Health Microbiology has approximately 130 technical and support staff. Reference capabilities in this office include diagnostic and surveillance services that focus on food borne diseases, sexually transmitted diseases, virus isolation, viral serology, and mycobacteriology. Individual units within the laboratory are headed by leading experts in the field who work together with the Office of Epidemiology, housed in the same facility, on a daily basis. Virology, serology and HIV laboratories perform a variety of conventional, serological and molecular tests to rapidly identify disease agents and characterize viral and bacterial pathogens. Standard tests performed by these laboratories include influenza, rabies, syphilis, EIA and western blot for HIV, and IgG and IgM EIA tests for rubeola/Rubella/Mumps/Hantavirus and IgM and Microsphere Immunoassay (MIA) for West Nile virus. This office also has a state-of-the-art molecular diagnostics unit that uses DNA based technologies including polymerase chain reaction (PCR) and DNA sequencing to assist the Office of Epidemiology with outbreak investigations. The microbiology laboratory has participated in a number of studies to validate CDC-developed methods which are now being used across the country. The laboratory routinely hosts post-doctoral fellows under various fellowships. During their placement in the laboratory, these scientists help to develop rapid methods such as those for Salmonella serotyping and the detection of Mycobacterium tuberculosis from patient samples by molecular methods. The Food Microbiology section is instrumental in determining food and environmental sources of contamination during foodborne outbreaks and the Parasitology lab provides diagnostic and confirmatory testing for blood parasites, ova and parasites in stool and the identification of gross specimens such as ticks and worms.

Office of Newborn Screening

The Newborn Screening program tests every infant born in Washington to detect and prevent the developmental impairments and life-threatening illness associated with congenital disorders that are specified by the State Board of Health. The Program provides appropriate follow-up and referral of those infants who screen positive to assure prompt diagnostic and treatment services. In addition, NBS provides long-term tracking of affected children to assure continued access to appropriate comprehensive health care. NBS performs tests on more than 170,000 specimens resulting in more than 11 million laboratory test results every year. The Office of Newborn Screening (NBS) has approximately 30 laboratory, quality assurance, disorder follow-up, and support staff.

Office of Laboratory Operations and Technical Support

The Office of Laboratory Operations and Technical Support provides internal technical and operational support to the State Public Health Laboratories (PHL). Included within the office are the following departments: Training Program/Technology Transfer, Media and Glassware Preparation, Mail Services, and Facilities Maintenance. The Office offers consultation to both local public and private health facilities. Specific areas of expertise include laboratory training, maintenance of laboratory equipment, facilities management, specimen handling, preparation of culture media, and shipping regulations.

Further, the Office provides many of the kits and containers used to deliver specimens to the PHL. The Office is responsible for their contents, quality control and shipping of the kits. During disease outbreaks, laboratory support from this unit is coordinated with the efforts of local health officers, physicians, and state epidemiologists to assist in outbreaks.

PHL Mailroom The PHL mailroom receives all mail, samples and specimens that are sent to the PHL. This unit also is responsible for preparation and supply of kits for many of the tests performed at the PHL.

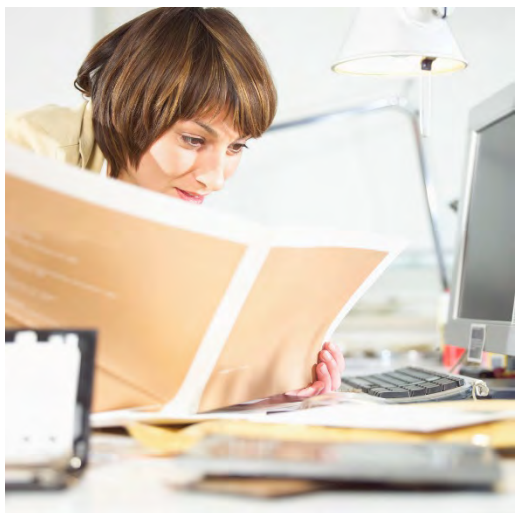
PHL Maintenance The Maintenance Department is responsible for the overall upkeep of the PHL building and grounds. This also includes providing for the maintenance of PHL vehicles, oversight on preventative maintenance of laboratory equipment, meeting room setup, building security and the provision of janitorial services.

Glassware and Media Preparation This department makes the majority of the media used by the PHL's laboratories. They are responsible for laboratory glassware preparation, waste disposal and many other support functions that are necessary for the laboratories to engage in and continue with their testing.

PHL Training Program The PHL training staff develops and presents training courses for internal and external laboratory personnel.

USING THE DIRECTORY OF SERVICES

The Directory of Services has been prepared to aid the user in properly utilizing the laboratories' services. The *Directory of Services* is reviewed biannually by the laboratory director and made available to our clients on the PHL website. Information is presented on what is



available, how to use it and whom to contact. The directory contains the telephone numbers of persons responsible for the various disciplines within the PHL. In the interest of providing timely service, users are encouraged to call the laboratory unit to address specific questions. For meaningful results in all areas, an appropriate sample, properly collected and transported along with adequate identifying information, is necessary. Turn-around times are measured in working days. Fees, if applicable, are noted in the directory (all fees are subject to change).

Important Note! The Washington State Public Health Laboratories are currently transitioning to a web based directory of services. All information regarding Microbiological and Environmental analysis (with the exception of Radiochemistry) can be found at the following location: www.doh.wa.gov/PHLLabTests

HOW TO CONTACT THE PUBLIC HEALTH LABORATORIES



24-Hour Emergency Telephone Service

(206) 418-5500

Dialing this phone number will connect the caller to the emergency contact phone operated by the Communicable Disease Epidemiology staff. The person who answers the phone will contact the appropriate laboratory staff.

PHL hours of operation are 8 a.m. to 5 p.m., Monday through Friday. The laboratories are closed on weekends and state holidays which include New Year's Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving and the day after Thanksgiving, and Christmas Day.

Driving Directions to Laboratory

Address: 1610 N.E. 150th Street
Shoreline, WA 98155

Parking: Free parking

I-5 Northbound



Take NE 145th St. exit (Exit #175). After exiting, move to the far right lane. Turn right at the traffic light onto NE 145th St. (eastbound). Proceed in the left lane on 145th St. to the next traffic light at 15th Ave. NE. Turn left onto 15th Ave. NE, travel four blocks on 15th Ave. NE (northbound) to NE 150th St. Turn right onto NE 150th. You will see the state laboratories on the left at the intersection of 17th Ave. NE and NE 150th St.

I-5 Southbound



Take NE 145th St. exit (Exit #175). After exiting, stay in the left lane of the off ramp. Turn left at the traffic light onto NE 145th St. (eastbound). Proceed in the left lane on 145th St. to the next traffic light at 15th Ave. NE. Turn left onto 15th Ave. NE and travel four blocks until you reach NE 150th St. Turn right onto NE 150th St. You will see the state laboratories on the left at the intersection of 17th Ave. NE and NE 150th St.



Note: All laboratory samples, specimens and supplies must be taken to the PHL Specimen Receiving Entrance near the center of the building on the 17th Ave. NE side. No deliveries will be accepted in the reception area at the main entrance.

Sampling and Specimen Collection Kits Provided by PHL



Specimen Kit Requisition Policy

In some cases, PHL supplies authorized submitters with specimen collection kits. Kits are specific to the type of specimen collected and the type of test being requested.

To order, write to:

Washington State Public Health Laboratories
1610 N.E. 150th Street
Shoreline, WA 98155

With the first order, you will receive an order sheet for subsequent use. Lab Supply Order Forms (LSOF) has been changing frequently as tests are added or removed. Please go to our website for the most current version. New forms will be sent to each submitter following an update to the LSOF. As the shelf life of supplies and kits is limited, plan to order no more than a month's supply. If you have any questions, please contact the Mail Services:

Telephone (206) 418-5579

Fax (206) 364-0339

Email phl.mailroom@doh.wa.gov

International Air Transport Association (IATA) and United States Postal regulations require the use of a triple mailing system for submission of cultures and certain other material. When requesting mailing containers, please specify the type of culture (enteric, TB, etc.) so you will receive the appropriate kit and laboratory form. Most of the specimen kits approved specimen shipper. Always wrap the laboratory form around the inner cardboard mailer to avoid contamination if the specimen leaks.

When submitting a bacterial or viral isolate by any means of transportation, the package must be packed in agreement with IATA and USDOT and US Postal Service regulations for Infectious Substances. The State Public Health Laboratories do not supply the packaging, but materials are commercially available from many sources. See Appendix A for the Federal Regulations which apply to shipping hazardous materials.

PHL provides only Category B Specimen shippers. Submitters who ship bacterial or viral isolates or other organisms must provide their own Category A shipper.

Please fill out the laboratory form completely. Telephone numbers have been given for areas of the laboratories. Whenever questions arise regarding specimens or any of the services provided by the State Laboratories, a phone call is welcomed and will often save time and effort. Please print clearly when filling out all paperwork.

Kits are expensive and many have expiration dates. Return all unused and outdated specimen kits and mailing containers to the PHL for recycling. For more information regarding mailing containers, biohazard bags or media, call Mail Services at (206) 418-5579 or fax at (206) 364-0339 or email at phl.mailroom@doh.wa.gov.

Mailing Kits Available

Microbiology

Complete information for the collection kits is available at:

www.doh.wa.gov/PHLLabTests
Under Forms--> Laboratory Supply Order Form

Enteric Pathogens

KITS	CONTENTS	REMARKS
Stool or Rectal	Cary-Blair transport medium, sterile swab, microbiology form and instructions. Shipper approved specimen shipper.	Use for isolation of enteric pathogens from stools: Salmonella, Shigella, E. coli, Yersinia, Vibrio and Campylobacter. Use sterile applicator swab to collect specimen, insert swab into Cary-Blair transport medium, break off stick at the score line below lid of specimen container, push cap on tightly, seal lid with pressure-sensitive labeling tape and mail immediately.
Enteric Pathogen Cultures for Identification	Enteric Bacteriology for shipper approved specimen shipper.	For pure cultures only, use screw-cap tubes. Do not send in liquid media unless absolutely necessary or specifically indicated. Campylobacter jejuni cultures should be sent in Cary-Blair transport medium.

Special Bacteriological Pathogens (Reference)

Individual items	CONTENTS	REMARKS
Bacteriology Culture	Microbiology form, an approved Category B specimen shipper.	Viable pure culture. Do not mail Petri plate; use a courier service. A valid attempt to identify the organism is required. Send laboratory results obtained.
Diphtheria Clinical Specimens, Contact or Case	Amies transport media	Take throat and nasopharyngeal cultures. Notify the Special Respiratory Pathogens unit.

Special Bacteriological Pathogens (Reference)

Individual items	CONTENTS	REMARKS
Pertussis	2 swabs for Nasopharyngeal specimens, screw cap tube for PCR sample, charcoal transport media for culture, 2 microbiology form (one for each specimen), immunization history form, directions, approved specimen shipper.	Diagnosis of pertussis requires both culture and PCR swab to be taken. Reference cultures and PCR requests accepted with Local Health Jurisdiction approval.
Forms are available online for Submitters. The PHL mailroom does not prepare kits and will only provide a shipper, if requested.		

Mycobacteriology (TB) – For more information call: (206) 418-5473

Complete information for the collection kits is available at

www.doh.wa.gov/PHLLabTests

Under Forms--> Laboratory Supply Order Form

Virology

KITS	CONTENTS	REMARKS
Virus Isolation	Viral transport medium, swab, and Virus Examinations form, and approved specimen shipper	Call (206) 418-5458 prior to sending samples. Ship in special mailing containers with ice packs. No wet ice. Kits provided per consultation with Virology Lab.
Rabies	Rabies Laboratory Report and Animal History form, specimen collection instructions, special bio-transport shipping container and bag, absorbent material, ice packs, outer box labeled as "UN3373, Category B, Biological Substance" with name and phone number of contact person.	Submit animal heads. Ship with ice packs. Send through your local health jurisdiction. Notify Virology Unit before shipping. Pre-approval from Communicable Disease Epidemiology is required.
RT PCR	Laboratory form, VTM and swabs, return box. Available for: influenza, mumps, measles. See Micro test menu.	Accepted from sentinel Labs, all local health jurisdictions, and others pre-approved by Department of Health Communicable Disease Epidemiology.

Specimen Collection Requirements

Clinical Specimen Collection

The collection of clinical specimens must follow established laboratory policies and procedures. These policies and procedures must be documented as required by Chapter 246-338 WAC, Medical Test Site Rules, State of Washington Department of Health, Office of Laboratory Quality Assurance. Refer to the table below for general specimen submission instructions. Turn to the submission guidelines of each laboratory unit, e.g. Serology, to which you will be sending the specimen, for specific detailed information.

Specimens to be tested at the Centers for Disease Control and Prevention (CDC)	
1.	All specimens being shipped to CDC in Atlanta, Ga., must be routed through the PHL.
2.	Turn-around times for results on these specimens will vary. Contact the individual PHL unit for specific information.
3.	A CDC DASH form must be enclosed with each specimen forwarded to the CDC. Please contact the PHL to request CDC DASH forms.

Environmental Samples

The collection of environmental samples must follow established laboratory/field policies and procedures. These policies and procedures must be documented. Refer to the material below for general sample submission instructions. Turn to the submission guidelines of each laboratory unit (i.e. Inorganic Chemistry) to which you will be sending the sample for specific detailed information.

Call us at (206) 418-5400 if you have questions about samples, interpretations, procedures, or any other aspect of Public Health Laboratories services. For public health emergencies after hours, call Communicable Disease Epidemiology at (206) 418-5500 or 1-877-539-4344.

Hand Delivery

Courier deliveries are received from 7:30 a.m. to 5:00 p.m., Monday through Friday. The Public Health Laboratories are **closed on weekends and holidays**. Special arrangements must be made with laboratory personnel prior to delivery for any high priority items arriving outside the hours of normal operation.

All laboratory samples, specimens, and supplies must be taken to the PHL specimen receiving entrance, near the loading dock at the center of the building. No deliveries are accepted in the reception area at the main entrance. The loading dock is located past the main entrance in the middle of the building, indicated with signage. The glass door to the right of the loading dock has a doorbell for specimen delivery. Ring bell to summon mailroom staff to accept delivery. All delivery persons must have picture identification and will be required to sign the delivery log as shown below.

Specimen Sign-In Sheet							
Date	Time	Company/Courier	# of Pkgs	Sender	Specimen Type	Pick-up time	Employee Name

For questions, or to arrange delivery outside of normal receiving hours, call the appropriate laboratory within PHL.

Important: When submitting specimens in person or by courier, DO NOT leave the packages or specimens outside the building. Unattended items left on the loading dock or outside the receiving door are discarded.

Confidentiality Notice

The Public Health Laboratories (PHL) places a very strong emphasis on protection of confidential data. The PHL also places a similar emphasis on providing timely results. In an attempt to ensure that these goals are met, the PHL requests that providers sign and return a Fax Confidentiality Statement stating that the receiving fax machine at the provider's facility is in a secure location and that only authorized personnel have access to faxed information. A sample of the Confidentiality Notice that will accompany each fax is provided as Appendix D.

This office provides consultation and training to other laboratories, hospitals, health care providers and local health/environmental jurisdictions to enhance technical skills, productivity, efficiency, and to assure quality service. It carries out a wide range of microbiology surveillance activities including isolation, definitive microbial identification, molecular diagnostics, drug sensitivity and/or confirmation of etiological agents of public health and epidemiological concerns.

Office of Public Health



Microbiology

www.doh.wa.gov/PHLLabTests



The Office of Environmental Laboratory Sciences provides testing services including microbiological, chemical, and radiological analyses to determine any potentially harmful health effects from environmental conditions or contamination. Samples can range from clinical specimens and drinking water to a wide variety of environmental sample types, including marine water, soil, vegetation, food, and shellfish.

The Office performs the majority of the analyses in support of the Department of Health programs. The Department of Ecology, the Department of Agriculture, local health jurisdictions, law enforcement, and private citizens make use of these laboratory services as well. The Water Bacteriology Laboratory serves as the reference laboratory for bacteriological testing of drinking water in the state of Washington.

OFFICE OF



ENVIRONMENTAL LABORATORY SCIENCES

www.doh.wa.gov/PHLLabTests

Environmental Laboratory Sciences

Important Note! The Washington State Public Health Laboratories are currently transitioning to a web-based directory of services. All information regarding Environmental analysis (with the exception of Radiation Chemistry), can be found at the following location:

www.doh.wa.gov/PHLLabTests

Radiation

The Radiation Chemistry Laboratory is capable of performing qualitative and quantitative radiochemical analyses for most radionuclides in environmental samples down to low environmental detection limits. The laboratory routinely tests soils, sediments, shellfish, fish, meat, sludge, mill tailings, milk, water, particulate air filters, vegetation, and food products. The laboratory also routinely tests wipe samples for removable contamination on surfaces.

Testing to trace downwind or downstream release levels is a time-consuming task. Typical turnaround times for selected routine analyses are listed below.

Turnaround Times

Wipes	Per customer request.
1-week standard, with 24 hr. emergency services available	
Gross Alpha/Beta in Air	3 weeks
Gross Alpha/Beta in Water	4 weeks

Turnaround Times

Gamma in Milk, Water, Food, or Air.....	2 weeks
Gamma in Soil	3 weeks
Strontium in Water	6 weeks
Strontium in Air, Food, Milk, or Soil.....	8 weeks
Radon	2 weeks
Radium in Water	6 weeks
Uranium in Water	6 weeks
Uranium in Soil	8 weeks
Thorium in Air, Water, Soil, Food.....	8 weeks
Plutonium in Water.....	6 weeks
Plutonium in Soil, Food.....	8 weeks
Americium in Air, Water, Soil, Food.....	8 weeks

The state Radiation Laboratory normally operates at full capacity, so turn-around times more rapid than those above require coordination with the programs which the laboratory supports. For one set of samples to have a priority, another set of samples will likely experience an increase in turnaround time.

Collection and Submission Instructions

The Radiation Chemistry Group primarily provides analytical services to regulatory and monitoring units of state agencies, primarily the Office of Radiation Protection of the Environmental Health Division of the Department of Health (ORP). Most requests for services can be arranged in conjunction with those groups. ORP can provide containers, sampling kits or sample collection advice for many types of samples. For

laboratory service inquiries please call (206) 418-5486. Sample submitters will need to furnish all the information requested on the laboratory forms that are provided by the ORP office.

OFFICE



OF NEWBORN SCREENING



*Saving lives with
a simple blood spot*

<http://www.doh.wa.gov/nbs>

Newborn Screening

The Washington State Board of Health (<http://sboh.wa.gov/>) determines which disorders will be included in the screening panel. The Office of Newborn Screening performs screening tests for selected disorders that the Board has determined meet the following criteria:

- Prevention potential and medical rationale
- Availability of treatment
- Public health rationale
- Availability of suitable testing technology
- Cost effectiveness

A complete list of disorders on the current screening panel, along with detailed information about the program, can be found on the Newborn Screening website: <http://www.doh.wa.gov/nbs>.

The screening is performed on blood from a heel stick that has been absorbed onto specialized filter paper. The filter paper is then air dried and submitted to the program for testing as soon as it is dry.

State law specifies that newborns have their blood specimens collected within 48 hours of birth. Specimens are to be submitted to the Office of Newborn Screening and received at the laboratory no later than 72 hours after collection. Parents may refuse testing on the basis of religious practices or tenets by signing a statement on the back of the NBS collection form. A fee is charged to parents through the hospital of birth or healthcare provider present at birth. A second newborn screen is highly recommended at 7 to 14 days of age. There is no additional fee for follow-up screening tests.

Turn-Around-Time (TAT):

- TAT is defined as the time between specimen arrival at the laboratory to results reported via mailer or electronic reporting system.
- TAT established by the laboratory for MS/MS tests, TSH, CAH, IRT, GALT, BIO, SCID and SMA results is five days. TAT for Hemoglobin, X-ALD, and CF DNA results is eight days. TAT for LSD results is 12 days. All specimens accessioned on a given day must be processed and set up for testing that same day.
- The QA coordinator or designee monitors TAT by running a query on un-mailed specimens. Documentation is required on any specimen that does not meet the above criteria.
- When TAT's are extended for an excessive period of time, clients will be notified.

Newborn Screening website: <http://www.doh.wa.gov/nbs>

Screening Kits

Health care providers may obtain screening kits from:

Office of Newborn Screening
State Public Health Laboratories
1610 NE 150th Street
Shoreline, WA, 98155
Phone: (206) 418-5410 or toll free at 1-866-660-9050
Fax: (206) 363-1610
E-mail: nbs.prog@doh.wa.gov

Online order form: <http://www.doh.wa.gov/Portals/1/Documents/5220/NBS-Supply.pdf>

Send specimens to:

Newborn Screening
Washington State Department of Health
PO Box 55729
Shoreline, Washington 98155-0729

All information regarding disorders detected, specimen submission kits, healthcare provider information, resources for parents may be found on the Newborn Screening website.



Office of Laboratory Operations and Technical Support provides internal technical and operational support to the State Public Health Laboratories. Included within the office are, Technology Transfer, Media and Glassware Preparation, Mail Services, Fiscal Management, Instrument Maintenance and Facilities Maintenance.

Consultation from these areas is offered to local public and private health facilities. Areas of expertise include laboratory training, maintenance of laboratory equipment, facilities management, specimen handling, preparation of culture media, and shipping regulations.

This office provides all the kits and containers used to deliver specimens to the State Laboratories, and they are responsible for the kit contents, the quality control and the shipping. During outbreaks of disease, laboratory support from this unit is coordinated with the efforts of local health officers, physicians, and state epidemiologists.

OFFICE OF



LABORATORY OPERATIONS AND TECHNICAL SUPPORT

Operations and Technical Support

Support Services

Mail room
Media Preparation
Glassware Preparation
Specimen Kit
Preparation
Shipping and Receiving

Technology Transfer

Laboratory Training
Meetings and Conferences

Maintenance

Building and Grounds
Security
Motor Pool

PHL Support Services

PHL Glassware

The PHL Dish Room and Glassware unit are responsible for ensuring all laboratory waste is properly decontaminated and disposed, and that all reusable plastic ware and glassware are properly cleaned and dried for laboratory use.

PHL Media Preparation

This unit makes almost all of the media used by the PHL testing laboratories, and is responsible for laboratory glassware preparation, laboratory waste disposal and many other support functions that allow the testing units to continue with their work.

PHL Mailroom

The PHL Mailroom provides mail services for the Offices within the PHL. Mail services include receiving and distributing inbound packages and mail to their appropriate destination within the PHL and outbound services for all PHL packages and mail that are to be sent to our customers.

The unit also provides specimen collection kits and specimen shipping supplies to PHL customers who submit specimen for Microbiology analyses at the PHL. Consultation is available to help our customers learn about shipping regulations and proper packaging of specimens to ensure our customers are meeting the shipping regulations when utilizing PHL specimen shipping supplies.

Additional information may be found in the ***Collection and Submission Instructions section*** for more details on how to properly submit specimens to the PHL.

PHL Specimen Receiving

The PHL Specimen Receiving is the PHL's central accessioning unit where all specimens and samples pass through for inspection and number assignment prior to analysis by the various offices within the PHL. All Category A, Category B, and Exempt specimens received from customers are subject to inspect and may be rejected if improperly packaged, damaged, or improperly labeled upon receipt. (All specimens undergo a two-step verification process to ensure data entry efforts are accurate and correct.

PHL Quality Assurance Program

The section coordinates the laboratory's compliance with all accreditation, proficiency and qualification regulations mandated by federal and state agencies, OSHA, EPA, HCFE, FDE, USDA, the DOE and the Washington State Medical Test Site rules. Additional QA functions performed by the QA Officer include:

- Coordinate the various subscribed or inter-laboratory proficiency testing programs.
- Maintain the quality assurance plan and consults with the laboratory's client groups.
- Research and resolves client complaints.
- Prepare for on-site inspections by internal or external groups that certify or accredit the Public Health Laboratory.
- Coordinate external College of American Pathologists, (CAP), and inspection of other laboratories per CAP licensing requirements.
- Facilitate the performance of pipette, thermometer, and weights calibration checks.
- Recommend employee training as required for the facility.

PHL Safety Program

The Safety Officer confers with and advises the laboratory director, managers, supervisors and employees on occupational safety and health issues. Plans, organizes and directs the laboratory's Safety and Health program to comply with OSHA, WISHA, IMR, the fire marshal and other applicable federal, state and local codes. Conducts accident investigations, inspections, and recommends proper corrective or preventive actions. Additional safety functions performed by the Safety & QA Officer:

- Collaborate with the DOH risk management group, maintains, and updates the laboratory Chemical Hygiene Plan as required by WAC 296-62-400 and the other laboratory safety manuals and plans.
- Coordinates the development of the PHL Disaster Response Plan, Emergency Response Plan and Evacuation Plan/Procedures in alignment with the departmental plans.
- Investigate employee industrial and vehicular accidents.
- Coordinate claims and reports with the DOH Risk Manager.
- Conduct local facility/laboratory industrial safety inspections.
- Manage the Occupational Medicine Program for the PHL. (Schedule immunizations, blood draws, etc.)
- Conduct interviews with employees, supervisors and managers to identify/correct unsafe practices and conditions.
- Perform risk assessments to ensure that the appropriate control measures are implemented.
- Manage the Respirator Protection program. Perform respirator fit testing and training.
- Responsible for the management of the chemical inventory.
- Perform safety orientations for new employees with the employee's supervisor.
- Perform ergonomic assessments and work with the DOH Office of Risk Management to ensure that the PHL complies with WISHA regulations.
- Recommend safety related training.
- Review facility designs and make safety related recommendations.
- Review, with the *Safety and Emergency Response Committee*, the animal handling procedure for the facility.

Public Health Laboratories Training Program

The PHL program has been conducting extensive laboratory training since it moved to the current facility in 1985. The facility includes a 1,035 square foot training laboratory complex, a classroom that will seat 24 people and a conference room for 90 people as well as staff members to provide training.

Training and Technical Assistance Provided

Conferences, symposia, workshops, seminars and bench training are scheduled throughout the state.

For information on the Public Health Laboratories training and technical assistance call (206) 418-5401. Audio-visual materials are available upon request.

TRAINING PROGRAM SERVICES				
TRAINING	WHO CAN PARTICIPATE	SERVICES	WHEN	PHONE #
Workshops Seminars Conferences	Announcements will describe target audiences	Given at the PHL or in local facilities. Designed to meet current needs. May be lectures or lectures and wet workshops.	By announcement	(206) 418-5401
Bench Training	Working laboratory scientists with approval from lab director	New technology management training. Practical experience.	Call to arrange	(206) 418-5401
State Laboratories Tours, Public Relations and Support of Professional Organizations	Laboratory professionals, students, anyone with a special interest, health and laboratory groups	Opportunity to see a public health laboratory and understand how it serves the citizens of Washington.	On request Call to reserve	(206) 418-5401
Student Rotations / Internships / Postdoctoral Rotations	College students who have completed degree required in microbiology, chemistry or health-related coursework.	Opportunity to become familiar with public health careers in their chosen field. Practical experience.	Arrangements must be made through student's advisor.	(206) 418-5401

PHL Directory of Services



APPENDICES

APPENDIX A

Shipping Information for PHL Clients

ICAO Guidance Document

Packaging and Labeling Checklists

- Method of Transport
- Infectious Substance Category A: Transport via Surface (taxi, private car, courier)
- Infectious Substance Category A: Transport via Air
- Biological Substance Category B: Transport via Surface
- Biological Substance Category B: Transport via Air
- Biological Substance Category B: Transport via USPS

Please see the ICAO website for further information

<https://www.icao.int/publications/pages/publication.aspx?docnum=9284>

Indicative List of Infectious Substances in Any Form Unless Otherwise Indicated (List may not be complete).

Category A, Infectious substances affecting humans

Microorganism	
<i>Bacillus anthracis</i> (cultures only)	Japanese Encephalitis virus (cultures only)
<i>Brucella abortus</i> (cultures only)	Junin virus
<i>Brucella melitensis</i> (cultures only)	Kyasanur Forest disease virus
<i>Brucella suis</i> (cultures only)	Lassa virus
<i>Burkholderia mallei</i> - <i>Pseudomonas mallei</i> – Glanders (cultures only)	Machupo virus
<i>Burkholderia pseudomallei</i> – <i>Pseudomonas pseudomallei</i> (cultures only)	Marburg virus
<i>Chlamydia psittaci</i> - avian strains (cultures only)	Monkeypox virus
<i>Clostridium botulinum</i> (cultures only)	<i>Mycobacterium tuberculosis</i> (cultures only)
<i>Coccidioides immitis</i> (cultures only)	Nipah virus
<i>Coxiella burnetii</i> (cultures only)	Omsk hemorrhagic fever virus
Crimean-Congo hemorrhagic fever virus	Poliovirus (cultures only)
Dengue virus (cultures only)	Rabies virus
Eastern equine encephalitis virus (cultures only)	<i>Rickettsia prowazekii</i> (cultures only)
<i>Escherichia coli</i> , verotoxigenic (cultures only)	<i>Rickettsia rickettsii</i> (cultures only)
Ebola virus	Rift Valley fever virus
Flexal virus	Russian spring-summer encephalitis virus (cultures only)
<i>Francisella tularensis</i> (cultures only)	Sabia virus
Guanarito virus	<i>Shigella dysenteriae</i> type 1 (cultures only)
Hantaan virus	Tick-borne encephalitis virus (cultures only) Variola virus

Hantaviruses causing hantavirus pulmonary syndrome Hendra virus Hepatitis B virus (cultures only) Herpes B virus (cultures only) Human immunodeficiency virus (cultures only) Highly pathogenic avian influenza virus (cultures only)	Venezuelan equine encephalitis virus Vesicular stomatitis virus (cultures only) West Nile virus (cultures only) Yellow fever virus (cultures only) <i>Yersinia pestis</i> (cultures only)
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2900	
Infectious substances affecting animals	
African horse sickness virus African swine fever virus Avian paramyxovirus Type 1 - Newcastle disease virus Bluetongue virus Classical swine fever virus Foot and mouth disease virus Lumpy skin disease virus	<i>Mycoplasma mycoides</i> - Contagious bovine pleuropneumonia Peste des petits ruminants virus Rinderpest virus Sheep pox virus Goat pox virus Swine vesicular disease virus Vesicular stomatitis virus

Infectious Substance Checklists

Category A, Ground and Air Transport (includes taxi, and private cars) 2021

Packaging Checklist	
{Documented Training is required prior to packaging and shipping infectious Agents: 49 CFR 172.700 (h), IATA Section 1.5} No Category A Specimens by USPS & UPS	
49 CFR 173.196	Triple packaging; primary and secondary are leak-proof for liquids and sift-proof for solids (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196 IATA 620	In ambient or higher temperature, primary receptacles have been heat-sealed, have a skirted stopper or a metal crimp seal. Screw caps must be reinforced with adhesive tape (Prudent step at ALL temperatures).
Table 49 CFR 172.101 49 CFR 172.102(c)(1)	Quantities: (<i>unless meet Special provisions A81</i>) a) Max. 50 mL or 50 gm for passenger aircraft b) Max. 500 mL or 500 gm primary and 4 L or 4 kg for total package for Cargo aircraft
	Paperwork is separated from the specimen by a plastic sleeve or bag.
49 CFR 173.196	Absorbent material, capable of containing entire contents of primary containers is placed between primary and secondary receptacles.
49 CFR 173.196	Multiple primaries placed in secondary packaging must be wrapped individually to prevent contact with each other.
49 CFR 173.196 IATA 620	The primary receptacle or secondary packaging used for infectious substances must be capable of withstanding an internal pressure producing a pressure differential of not less than 95 kPa and temperatures from -40°C to +55°C, without leakage (<i>utilize commercially available shipping systems</i>).

49 CFR 178.503	Certified outer shipping package meets UN class 6.2 specifications and packaging instructions (PI) 620 and bears the UN Packaging Specification Marking. Packaging systems must be 4G Class 6.2 and include the last two digits of the year of manufacture (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196 IATA 620	Outer packaging at least 100 mm in overall external dimensions and is rigid.
49 CFR 173.196 IATA 620	An itemized list of contents is enclosed between secondary packaging and outer packaging.
49 CFR 173.199	Interior supports in place to secure secondary package after ice has dissipated or melted (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196	Chemical Ice, dry ice, or wet ice (<i>if applicable</i>) has been placed outside the secondary package (Wet ice should only be used for same day delivery)
49 CFR 173.	<u>If using wet or dry ice.</u> For wet ice, the package must be leak-proof (sealed in plastic bag). For dry ice, packaging must permit release of carbon dioxide (<i>utilize commercially available shipping systems</i>).

49 CFR 172.312 IATA 626 Section 7	Orientation (Up) arrows on opposite sides of shipping container.
49 CFR 172.400, 49 CFR 172.101, IATA 7.1	A UN shipping name label (<i>unless meets Special provision A140</i>): "Infectious substance, affecting humans, UN 2814" and the volume/weight of the sample.
49 CFR 172.432	Diamond shaped Class 6 Infectious Substance label with the following "In case of damage or leakage, immediately notify public health authority.
IATA	For volumes over 50 mL (and special provisions A81 are not applicable) "Cargo only" label (orange danger label) is placed adjacent to Class 6 label.
49 CFR 172.446	Dry Ice: Diamond shaped Class 9 label placed on outer packaging. Enter weight in Kg.
IATA 620	Shipper's name, address and telephone number on box. Consignee's name and address on box.
DOT/IATA	Overpacks (<i>not to be confused with outer packaging</i>), if used, must have all the labeling of inner packagings and be marked, "Overpack".

Shipper's Declaration of Dangerous Goods

(Download and type, do not hand write)

49 CFR 172.301 (d)	Shipper's name and address
49 CFR 172.301 (d)	Consignee's name and address
	Number of pages using (e.g. Page 1 of 1)
	Cross out "Radioactive" under shipment type

	Cross out "Passenger aircraft" or "Cargo Aircraft" depending on quantities
49 CFR 172.202 Table 172.101	Proper Shipping Name (<i>unless meets Special provision A140</i>): "Infectious Substance, Affecting Humans (<i>weight of specimen</i>)" "Dry Ice" (<i>if applicable</i>)
49 CFR 172.202 Table 49 CFR 172.101	Class or Division: "6.2" for organisms "9" for Dry ice (<i>if applicable</i>)

Packaging Checklist

{Documented Training is required prior to packaging and shipping infectious Agents:49 CFR 172.700 (h), IATA Section 1.5}

No Category A Specimens by USPS & UPS

Marking and Labeling Requirements

49 CFR 172.301	UN or ID number: "UN2814" for organisms "UN1845" for Dry ice <i>(if applicable)</i>
49 CFR 172.202 (a)(4)	Packing Group
49 CFR 172.202 Table 49 CFR 172.101	Quantity and type of Packing: e.g. "1 x 50 mL" for organisms e.g. "3 kg" for Dry Ice <i>(if applicable)</i> "Packed in one fiberboard box"
IATA 620 IATA 954	Packing Instructions: Infectious Substance.....620 Dry Ice.....954 Authorization: Insert special provisions code if applicable
49 CFR 172.604 (d) IATA 620	Additional Handling information: add the following: "I declare that all of the applicable air transport requirements have been met." "Emergency Contact: <i>(name)</i> {phone numbers must be a 24/7 number assigned to a live person}" {Shipper is required to make advance arrangements with consignee and the carrier to ensure that shipment is transported and delivered without delay}
	Name/Title of Signatory:
	Place and Date:
	Signature: <i>(make sure you are in compliance before signing)</i>

Additional

CAP Requirement	Prior to shipment notify the Washington State Public Health Lab of its arrival time. Email: PHL.mailroom@doh.wa.gov Phone: (206) 418-5579 FAX No.: (206) 364-0339
42 CFR 72.3 (f)	You must keep a copy of a receipt of delivery.
42 CFR 72.4	You must notify the Director, CDC, if shipment was not received within 5 days.
49 CFR 172.201 (e)	You must retain a copy of the shipping paper for 2 years after acceptance by the carrier. It must include the date of acceptance (keep the air bill).

Special Provisions

A81	The quantity limits shown in Columns J and L do not apply to body parts, organs or whole bodies. <i>Note: Blood, urine and other body fluids are not considered "body parts" for the purposes of this special provision.</i>  Transport in accordance with this Special Provision must be noted on the Shipper's Declaration for Dangerous Goods.
A140:	When the infectious substances to be transported are unknown, but suspected of meeting the criteria for inclusion in Category A and assigned to UN 2814 or UN 2900, the words "suspected category A infectious substance" must be shown in parentheses following the proper shipping name on the Shipper's Declaration for Dangerous Goods, but not on the outer packagings.

Biological Substance Category B Ground, USPS, & Air Transport (includes taxi & private car) 2016	
Packaging Checklist {Documented Training is required prior to packaging and shipping infectious Agents: 49 CFR 172.700 (h), IATA Section 1.5}	
49 CFR 173.196	Triple packaging; primary and secondary are leak-proof for liquids and sift-proof for solids (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196 IATA 650	In ambient or higher temperature, primary receptacles have been heat-sealed, have a skirted stopper or a metal crimp seal. Screw caps must be reinforced with adhesive tape (Prudent step at ALL temperatures).
49 CFR 173.6 amendment IATA 650	Quantities: a) For liquids: Max. each inner package 1.0 L and Max. outer packaging 4 L. b) For solids: Max inner package 4 kg and max. outer packaging 4 kg, excluding ice, dry ice or liquid nitrogen. Passenger or Cargo aircraft acceptable.
	Paperwork is separated from the specimen by a plastic sleeve or bag.
49 CFR 173.196 IATA 650	Absorbent material, capable of containing entire contents of primary containers is placed between primary and secondary receptacles.
49 CFR 173.196 IATA 650	Multiple primaries placed in secondary packaging must be wrapped with cushioning material to prevent contact with each other.
49 CFR 173.196 IATA 650	The primary receptacle or secondary packaging used for infectious substances must be capable of withstanding, without leakage, an internal pressure producing a pressure differential of not less than 95 kPa and at temperatures between -40°C to $+55^{\circ}\text{C}$ (<i>utilize commercially available shipping systems</i>).

49 CFR 173.196 IATA 650	Outer packaging with one side at least 100 mm x 100 mm. Outer package must be of rigid construction. Completed package must meet drop test (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196 IATA 650	An itemized list of contents is enclosed between secondary packaging and outer packaging.
49 CFR 173.199	Interior supports in place to secure secondary package after ice has dissipated or melted (<i>utilize commercially available shipping systems</i>).
49 CFR 173.196	Chemical Ice, dry ice, or wet ice (<i>if applicable</i>) must be placed outside the secondary package (<i>Wet ice should only be used for same day delivery</i>)
49 CFR 173.196	<u>If using wet or dry ice.</u> For wet ice, the package must be leak-proof (sealed in plastic bag). For dry ice, packaging must permit release of carbon dioxide (<i>utilize commercially available shipping systems</i>).

Marking and Labeling Requirements	
OSHA: 1910.103 o(g)(1)(i)(A)	Biohazard warning label attached to secondary packaging (not outside box).
49 CFR 172.312 IATA 620 Section 7	Orientation (Up) arrows on opposite sides of shipping container are optional.
IATA 650	Outer packaging is marked "Biological Substance, Category B" adjacent to diamond marking (2"x 2") with inner lettering: "UN3373". (<i>As of October 1, 2006, only "Biological Substance, Category B" will be accepted as the proper shipping name</i>)
49 CFR 172.446	Dry Ice: Diamond shaped Class 9 label placed on outer packaging. Enter weight in Kg.
IATA 620	Name and telephone number of person responsible for shipment. Inside or on outside of package. USPS required it on outer package and inside.
DOT IATA 7.1.4	Overpacks (<i>not to be confused with outer packaging</i>), if used, must have all the labeling of inner packagings and be marked, "Overpack".

Documentation	
CAP Requirement	Prior to shipment notify the Washington State Public Health Lab of its arrival time. Email: PHL.mailroom@doh.wa.gov Phone: (206) 418-5579 FAX No.: (206) 364-0339
IATA 650 and 954	Airbill: In the Nature and Quantity of Goods box place "Biological Substance, Category B" and/or "Dry Ice".

49 CFR 172.201 (e)	You must retain a copy of the shipping paper for 2 years after acceptance by the carrier. It must include the date of acceptance (keep the airbill).
42 CFR 72.3 (f)	<i>You must keep a copy of a receipt of delivery.</i>

APPENDIX B

PHL Accreditation and Certification

Accreditation Body	Certification Number
Clinical Laboratory Improvement Act (CLIA)	50Do661453
College of American Pathologists (CAP)	24626-01
Department of Energy - Radiation Measurement Laboratory	WN-Lo74-1
Environmental Protection Agency (EPA) for drinking water bacteriology and environmental/radiation chemistry	WA 00003
Food and Drug Administration (FDA)	FOOD #475 SHELLFISH #705
Medical Test Site License (MTS) WA DOH HSQA Office of Laboratory Quality Assurance (LQA)	MTS-1327