Laboratory Contacts

When shipping specimens via third party vendors (FedEx, UPS, WPX, etc.) use:

<table>
<thead>
<tr>
<th>Alaska State Public Health Lab</th>
<th>Alaska State Virology Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage Laboratory</td>
<td>Fairbanks Laboratory</td>
</tr>
<tr>
<td>5455 Dr. Martin Luther King Jr. Ave</td>
<td>1051 Sheenjek Drive</td>
</tr>
<tr>
<td>Anchorage, AK 99507</td>
<td>Fairbanks, AK 99775</td>
</tr>
</tbody>
</table>

When shipping specimens and other mail via United States Postal Service (USPS) use:

<table>
<thead>
<tr>
<th>Alaska State Public Health Lab</th>
<th>Alaska State Virology Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage Laboratory</td>
<td>Fairbanks Laboratory</td>
</tr>
<tr>
<td>PO Box 196093</td>
<td>PO Box 60230</td>
</tr>
<tr>
<td>Anchorage, AK 99519-6093</td>
<td>Fairbanks, AK 99706-0230</td>
</tr>
<tr>
<td>Phone: 907-334-2100</td>
<td>Phone: 907-371-1000</td>
</tr>
<tr>
<td>Fax: 907-334-2161</td>
<td>Fax: 907-474-4036</td>
</tr>
<tr>
<td>Business Hours:</td>
<td></td>
</tr>
<tr>
<td>8 am – 4:30 pm Monday – Friday</td>
<td>7:30 am – 4:30 pm Monday – Friday</td>
</tr>
<tr>
<td>Emergency Calls After Hours</td>
<td>Emergency Calls After Hours</td>
</tr>
<tr>
<td>1-855-222-9918</td>
<td>1-855-371-1001 option 6</td>
</tr>
</tbody>
</table>

Alaska State Public Health Laboratory Website

Chief of the Section of Laboratories
Dr. Bernd Jilly
Phone: 907-334-2109

Deputy Director of Laboratories
Dr. Jack Chen
Phone: 907-371-1017

State Virology Laboratory – Fairbanks
Dr. Jayme Parker, Lab Manager
Phone: 907-371-1005
Molecular – 907-371-1003
Immunology – 907-371-1004

Analytical Chemistry
State Public Health Laboratory - Anchorage
Dave Verbrugge
Phone: 907-334-2156

State Public Health Laboratory – Anchorage
Dr. Bernd Jilly, Clinical Microbiology Laboratory Manager
Phone: 907-334-2108

Bioterrorism/Special Pathogens/Molecular Biology
State Public Health Laboratory – Anchorage
Dr. Michael Stevenson
Phone: 907-334-2110
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<th>Page</th>
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<td>Instructions for Collecting Sputum for TB Testing</td>
<td>89</td>
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<td>TB NAAT Information Sheet</td>
<td>91</td>
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<td>Mumps Specimen Collection Instructions – Buccal Swabs</td>
<td>97</td>
</tr>
</tbody>
</table>
Submitter Criteria

Clinical:

- All health care providers licensed or certified by the State of Alaska.
- Laboratories seeking reference or confirmatory testing.

Environmental:

- Animals suspected of rabies may be submitted by health officers, public health nurses, veterinarians, physicians, law enforcement and pet owners with prior approval from Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.
- Bioterrorism or Chemical Terrorism specimens may be submitted by law enforcement, health care providers and diagnostic laboratories upon consultation with Section of Epidemiology.
- Biomonitoring specimens may be submitted with approval from the Section of Epidemiology 907-269-8000 during business hours or 800-478-0084 during non-business hours.
Specimen Collection Kits

The State of Alaska Public Health Laboratories provides specimen collection kits free of charge to all Alaska Health Care Providers.

Please monitor expiration dates carefully. Samples collected in expired transport media or expired blood collection devices are unsatisfactory and will not be tested.

** Supply Request Form **

<table>
<thead>
<tr>
<th>Supply</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APTIMA® CT/GC/Trichomonas Collection Kits</td>
<td>3 kit types: 1) Urine Transport 2) Unisex Swab Transport for endocervical, urethral, eye, rectal, or oropharyngeal collections 3) Vaginal Transport</td>
</tr>
<tr>
<td>ETM</td>
<td>Enteric Transport Medium (ETM) for stool cultures</td>
</tr>
<tr>
<td>Intestinal Ova and Parasite Kit (O&amp;P)</td>
<td>10% buffered formalin and Zinc-PVA fixative set</td>
</tr>
<tr>
<td>Cary Blair Swabs</td>
<td>Used for transport of isolated enteric pathogens</td>
</tr>
<tr>
<td>TB Sputum Cones</td>
<td>50 mL cones with sodium carbonate preservative</td>
</tr>
<tr>
<td>Norovirus</td>
<td>Request from Section of Epidemiology: 1-907-269-8000 during business hours OR 1-800-478-0084 during non-business hours</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>BBL BD CultureSwab™ EZ</td>
</tr>
<tr>
<td>Pinworm</td>
<td>Pinworm Paddle</td>
</tr>
<tr>
<td>UTM and swab kit</td>
<td>Universal Transport Media (UTM) for stabilizing viruses with collection swabs. Swabs are made of synthetic, plastic materials only (i.e. Dacron). Metal, wood, calcium alginate or cotton material will NOT be accepted.</td>
</tr>
</tbody>
</table>

** Please note – the Alaska State Public Health Laboratories do NOT supply blood collection tubes or Biohazard Bags. **
Request Forms and Specimen Labeling

- A properly completed laboratory test request form must accompany each diagnostic specimen. The following fields are highlighted on the Lab Request and are required:
  - Patient’s first and last name &/OR other identifier. (example: chart #, medical records #, prison ID)
  - Date of birth
  - Gender
  - Specimen source
  - Date of specimen collection (time if applicable)
  - Provider name & mailing address
  - Test(s) requested
  - Patient Status (Fairbanks requisitions only):
    - In or Out-patient, Long term care, Pregnant

- Identifiers on the specimen itself should match the Laboratory Test Request exactly. At a minimum, the specimen should be labeled with:
  - The patient’s full first and last name OR a unique identifier
  - The patient’s date of birth (DOB) OR Other Identifying Number

- Specimens must be collected and shipped properly. Please refer to specific collection and shipping instructions for testing.

- To request additional testing on a specimen held by the laboratories, please fax or mail a new request form requesting the additional testing. Testing cannot be performed until the request for additional testing is received.

- Specimens that have leaked in transit will be rejected as unsatisfactory at time of receipt.

- Unlabeled specimens are UNSATISFACTORY and will not be processed.
Laboratory Test Requisition Forms

Alaska State Public Health Laboratory - Anchorage
(http://www.dhss.alaska.gov/dph/Labs/Documents/publications/AncSupplyReq.pdf)

Alaska State Virology Laboratory - Fairbanks
(http://www.dhss.alaska.gov/dph/Labs/Documents/publications/FbxSupplyReq.pdf)

Alaska State Virology Laboratory - Rabies
(http://www.dhss.alaska.gov/dph/Labs/Documents/publications/Rabies_Instructions.pdf)
Specimen Shipping

For current shipping regulations and instructions, please refer to IATA, DOT, US Postal Service, and American Society of Microbiology (ASM).

http://www.iata.org/index.htm

US DOT - Transporting Infectious Substances Safely

http://www.usps.com/

ASM Sentinel Laboratory Guidelines for Packaging & Shipping
(http://www.asm.org/index.php/guidelines/sentinel-guidelines)

Specimens must be shipped according to current federal, state and local laws. Upon request, Alaska State Laboratories provides ambient temperature shipping boxes that meet current shipping regulations.

Supply Request Form
(http://www.dhss.alaska.gov/dph/Labs/Documents/publications/LabSupplyRequest.pdf)

Unless otherwise authorized, the State of Alaska does not provide postage or funds to ship samples for testing to the laboratories.

Reports and Results

- Preliminary and final reports will be mailed to submitters as testing is completed.

- Submitters will be notified of significant or positive results by phone or fax (if requested).

- Section of Epidemiology is notified of results reportable to the Alaska Division of Public Health, but it is also the responsibility of the Health Care Provider and/or the referral laboratory to report accordingly.

Infectious Disease Pathogens Reportable by Laboratories
(http://dhss.alaska.gov/dph/Epi/Documents/pubs/conditions/ConditionsReportable_LABS.pdf)
Acetone
See Toxic Alcohols and Glycols

Acid fast stain for Cystoisospora (Isospora), Cyclospora, and Cryptosporidium oocysts

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage Requisition Form</td>
<td></td>
</tr>
<tr>
<td>Disease(s)</td>
<td>Isosporiasis, Cyclosporiasis, Cryptosporidiosis</td>
</tr>
<tr>
<td>Organism(s)</td>
<td>Cystoisospora (Isospora) belli, Cyclospora cayetanensis, Cryptosporidium species</td>
</tr>
<tr>
<td>Test Method</td>
<td>Acid-fast stain</td>
</tr>
<tr>
<td>Specimen</td>
<td>Stool</td>
</tr>
<tr>
<td>Collection Container</td>
<td>Intestinal O &amp; P Collection Kit</td>
</tr>
<tr>
<td>Request supplies</td>
<td></td>
</tr>
<tr>
<td>Storage/Transport</td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Specimen, Category B</td>
</tr>
<tr>
<td>Results</td>
<td>Cystoisospora (Isospora) belli Observed/Not Observed</td>
</tr>
<tr>
<td></td>
<td>Cyclospora cayetanensis Observed/Not Observed</td>
</tr>
<tr>
<td></td>
<td>Cryptosporidium species Observed/Not Observed</td>
</tr>
<tr>
<td>Turnaround Time</td>
<td>3-5 days</td>
</tr>
</tbody>
</table>
### Aerobic bacterial culture Identification

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease(s)</td>
<td>Sepsis, infection</td>
</tr>
<tr>
<td>Organism(s)</td>
<td>Aerobic bacteria</td>
</tr>
<tr>
<td>Test Method</td>
<td>Culture</td>
</tr>
<tr>
<td>Availability</td>
<td>Referrals only, no routine cultures</td>
</tr>
<tr>
<td>Specimen</td>
<td>Blood, cerebral spinal fluid (CSF), tissue, wounds</td>
</tr>
<tr>
<td>Storage/Transport</td>
<td>Specimen must be received within 48 hours of collection. Ambient temperature. Package and label as Biological Specimen, Category B</td>
</tr>
<tr>
<td>Results</td>
<td>Organism identified (genus and species)</td>
</tr>
<tr>
<td>Turnaround Time</td>
<td>2-5 days</td>
</tr>
</tbody>
</table>
## Aeromonas spp.

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease(s)</td>
<td>Bacterial gastroenteritis</td>
</tr>
<tr>
<td>Organism(s)</td>
<td>Aeromonas species</td>
</tr>
<tr>
<td>Test Method</td>
<td>Culture</td>
</tr>
<tr>
<td>Specimen</td>
<td>Stool in Enteric Transport Media (ETM)</td>
</tr>
<tr>
<td></td>
<td>Pure isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
<tr>
<td>Special Conditions</td>
<td>Stool specimen should not be contaminated with water, urine, barium, antibiotics or mineral oil.</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>1. Collect stool in clean dry container or on plastic wrap stretched across toilet.</td>
</tr>
<tr>
<td></td>
<td>2. Sample must be placed into ETM within one hour of sample collection.</td>
</tr>
<tr>
<td></td>
<td>3. Carefully open ETM, use scoop mounted in lid to place approximately a walnut size amount of stool in to transport. Add enough stool to fill exactly to red fill line. Do not overfill.</td>
</tr>
<tr>
<td>Storage/Transport</td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Specimen, Category B</td>
</tr>
<tr>
<td>Results</td>
<td>Aeromonas species Isolated/Not Isolated</td>
</tr>
<tr>
<td>Turnaround Time</td>
<td>2-7 days</td>
</tr>
</tbody>
</table>
**Bacillus anthracis**

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Anthrax infection forms: Cutaneous, gastrointestinal, or inhalation. Malignant pustule, malignant edema, Wool-Sorter disease.</td>
</tr>
<tr>
<td><strong>Organism</strong></td>
<td><em>Bacillus anthracis</em></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Bacterial isolate, cutaneous lesion, stool, rectal swab, blood cultures, whole blood, sputum, CSF, tissue, nasal swab (for intentional release exposures), environmental samples</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Refer to <a href="https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C">ASM Sentinel Level Clinical Microbiology Guidelines (https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C)</a>. Contact the ASPHL with questions at 907-337-2100.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs. Ambient temperature shipping is acceptable. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Presumptive <em>B. anthracis</em> detected/not detected Confirmatory <em>B. anthracis</em> detected/not detected</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2-5 days</td>
</tr>
</tbody>
</table>
# Blood parasites

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Malaria, Babesiosis, Trypanosomiasis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Plasmodium species</em>, <em>Babesia species</em>, <em>Trypanosoma species</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Microscopic examination</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>EDTA whole blood sample, minimum 2 mL</td>
</tr>
<tr>
<td></td>
<td>Both thick and thin smears (2 each), made as soon as possible after EDTA blood collection</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Refer to CDC DPDx Website for collection and smear preparation instructions: <a href="http://www.dpd.cdc.gov/dpdx/HTML/DiagnosticProcedures.htm">http://www.dpd.cdc.gov/dpdx/HTML/DiagnosticProcedures.htm</a></td>
</tr>
<tr>
<td><strong>Special Conditions</strong></td>
<td>Specimens should be collected before treatment is initiated, generally midway between chills. Multiple specimens may be necessary at 6 to 12 hour intervals over 2 to 3 days. Include travel history if applicable.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship ambient temperature. Do not freeze. Samples &gt;7 days old will not be tested.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>No Blood Parasites observed</td>
</tr>
<tr>
<td></td>
<td><em>Plasmodium falciparum</em></td>
</tr>
<tr>
<td></td>
<td><em>Plasmodium malariae</em></td>
</tr>
<tr>
<td></td>
<td><em>Plasmodium ovale</em></td>
</tr>
<tr>
<td></td>
<td><em>Plasmodium vivax</em></td>
</tr>
<tr>
<td></td>
<td><em>Babesia species</em></td>
</tr>
<tr>
<td></td>
<td><em>Trypanosoma species</em></td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-2 days</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Requests for Microfilaria are referred to the CDC</td>
</tr>
</tbody>
</table>
# Botulinum neurotoxin, Clostridium botulinum

**Testing site**  
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Disease(s)**  
Botulism, Foodborne, wound, intestinal, or infant botulism

**Organism(s) or Agent(s)**  
Botulinum neurotoxin producing species of *Clostridium* OR botulinum neurotoxin

**Test Method**  
Culture and/or toxin assays

**Availability**  
All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.

Contact the ASPHL prior to submitting samples 907-334-2100.

**Specimen**  
Stool, enema fluid, gastric aspirate, pre-antitoxin serum, food, and environmental samples.

**Specimen Collection**  
Refer to ASM Sentinel Level Clinical Microbiology Guidelines ([https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C](https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C)). Contact the ASPHL with questions.

**Storage/Transport**  
Store refrigerated. Ship with cool packs. Package and label as Biological Substance, Category B, ship as quickly as possible.

**Results**  
- **Toxin Assays**
  - Botulinum neurotoxin detected (type specified)
  - No toxin detected

- **Culture**
  - *Clostridium botulinum* isolated (toxin produced typed)
  - *Clostridium botulinum* not isolated
  - No growth

**Turnaround Time**  
- Toxin 14 days
- Culture 7-30 days
<table>
<thead>
<tr>
<th><strong>Brucella spp.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing site</strong></td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
</tr>
<tr>
<td><strong>Results</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
</tr>
<tr>
<td><strong>Burkholderia mallei, Burkholderia pseudomallei</strong></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Testing site</strong></td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
</tr>
</tbody>
</table>
| **Results** | Presumptive *B. mallei* Detected/Not Detected  
Confirmatory *B. pseudomallei* Detected/Not Detected |
| **Turnaround Time** | 3-7 days |
## Campylobacter spp.

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Campylobacteriosis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Campylobacter jejuni</em>, <em>Campylobacter species</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Pure isolates (Cary Blair Transport Swabs)</td>
</tr>
<tr>
<td></td>
<td>Stool in ETM (<a href="#">Stool culture and Parasitology Detailed Collection Instructions</a>)</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ship stool at ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Ship isolates on cold packs</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td><em>Campylobacter jejuni</em></td>
</tr>
<tr>
<td></td>
<td>Presumptive <em>Campylobacter species</em>, sent to CDC for identification</td>
</tr>
<tr>
<td></td>
<td>No <em>Campylobacter species</em> isolated</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2-5 days</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A laboratory that isolates <em>Campylobacter</em> must submit an isolate or an aliquot of the original specimen to ASPHL.</td>
</tr>
</tbody>
</table>
## Chemical Terrorism Event

### Testing site
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

### Agent
**Unknown** toxic chemical exposure(s)

### Test Method
Rapid Toxic Screen (performed by the Centers for Disease Control and Prevention in Atlanta, GA)

### Availability
This testing is available to clients with suspected exposure to an unknown toxic chemical(s), as determined and prioritized by Epidemiology (269-8000) and law enforcement.

**Contact the ASPHL prior to submitting specimens 907-334-2100.**

### Specimen
Urine and whole blood

### Specimen Collection
Complete instructions are available:
- [CDC Specimen Collection for Chemical-Exposure Incident](https://emergency.cdc.gov/chemical/lab.asp)

- **Urine**: at least 25 mL in a screw-capped plastic container with a plastic lid; freeze immediately.

- **Whole blood**: Use **three** 5 or 7 mL purple-top (EDTA) tubes, and **One** 3, 5 or 7 mL plasma tube (EITHER gray-top [glycolytic inhibitor, potassium oxalate] OR green-top [sodium heparin]).

### Storage/Transport
Refrigerate blood samples. Freeze urine samples.

Sample flow may vary according to the specific circumstances of an event, but generally specimens will be delivered to the Alaska State Public Health Laboratory – Anchorage for processing. Specimens from the first 40 victims will be shipped immediately to the Centers for Disease Control and Prevention in Atlanta, Georgia for the Rapid Toxic Screen. Samples from additional victims will be analyzed when the results of the screen are complete.

Contact the ASPHL for complete shipping instructions. Also please refer to guidance provided at the CDC website (link above).

Package and label as Biological Substance, Category B. Ship urine (frozen on dry ice) and blood samples (refrigerated with cold packs) in separate coolers.

### Results
Samples are screened for the presence of over 150 toxic chemicals. Detected chemicals are identified and quantified. Federal and state experts will assist with the interpretation of results.
Partial results will be communicated as tests are performed sequentially at CDC, beginning approximately 36 hours after specimen receipt at the Alaska Public Health Laboratory. Full Rapid Toxic Screen results for the first 40 victims will be available approximately 4 days after specimen receipt at the Alaska Public Health Laboratory.

<table>
<thead>
<tr>
<th>Chikungunya virus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing site</strong></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Results</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
</tr>
</tbody>
</table>
## Chlamydia & Gonorrhea

**Testing site**  
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Disease(s)**  
Chlamydia, Gonorrhea, STD

**Organism(s)**  
*Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (GC)

**Test Method**  
Nucleic Acid Amplification (NAAT). Target Mediated Amplification (TMA) for the detection of ribosomal RNA (rRNA) from *Chlamydia trachomatis* and/or *Neisseria gonorrhoeae*.

**Availability**  
Please contact the ASPHL (907-334-2100) to set up an account.

**Specimen**  
<table>
<thead>
<tr>
<th>Urine</th>
<th>Urethral (male only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal</td>
<td>Rectal</td>
</tr>
<tr>
<td>Endocervical</td>
<td>Oropharyngeal</td>
</tr>
<tr>
<td></td>
<td>Conjunctival on prior approval</td>
</tr>
</tbody>
</table>

**Specimen Collection**

- **Gen-Probe APTIMA Combo2 Transport Tubes:**
  - **Urine Collection Kit (yellow kit):**
    - First catch urine of initial urine stream; must be added to transport within 24 hours of collection.
  - **Multitest Swab Collection Kit (orange kit):**
    - Used for Vaginal, Rectal, and Oropharyngeal
    - Follow instruction provided in kit
  - **Unisex Swab Collection Kit (white kit):**
    - Used for endocervical, urethral, rectal, oropharyngeal, and eye
    - Add swabs to transport immediately.
    - Do not submit white shafted cleaning swabs for testing.

**Special Conditions**  
**Not a test of cure.** Tests that are performed less than 4-6 weeks after completion of therapy might be falsely positive due to the presence of nonviable organisms.

**Storage/Transport**  
Ambient temperature

- Package and label as Biological Specimen, Category B
- Urine specimens must be tested within 30 days of collection, Unisex swab specimens within 60 days.

**Results**

- *Chlamydia trachomatis*  
  - Positive/Negative
- *Neisseria gonorrhoeae*  
  - Positive/Negative

Therapeutic failure or success cannot be determined with the APTIMA Combo 2 Assay since the nucleic acid may persist following appropriate antimicrobial therapy.

**Turnaround Time**  
1-2 days
### Coxiella burnetii

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Q-Fever</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Coxiella burnetii</em></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>EDTA whole blood for PCR collected 1-7 days from onset of symptoms and prior to antibiotics. Serum for immunofluorescent assay (IFA): o acute 1-7 days from onset o convalescent 21-35 days from onset Refer to <a href="https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C">ASM Sentinel Level Clinical Microbiology Guidelines</a>.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs. Ambient temperature shipping is acceptable. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Presumptive <em>C. burnetii</em> Detected/ Not detected Confirmatory (Serum only) <em>C. burnetii</em> Detected/ Not detected</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2 days for PCR 2-3 weeks for IFA Referral Testing</td>
</tr>
<tr>
<td><strong>Cyanide</strong></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Testing site</strong></td>
<td>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</td>
</tr>
<tr>
<td><strong>Toxic Effect</strong></td>
<td>Inhibition of oxygen use by cells</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Gas Chromatography with Mass Selective Detection</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>Test not performed routinely and only with prior approval. Contact the ASPHL. Phone business hours 907-334-2100; after hours on-call pager 1-800-224-7063.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Collect whole blood in one 3, 5 or 7 mL EDTA (purple-top) tube.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Quantitative cyanide concentration</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>4 hours from time of receipt</td>
</tr>
</tbody>
</table>
## Dengue virus

### Testing site
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

### Anchorage Requisition Form

<table>
<thead>
<tr>
<th>Test Method</th>
<th>PCR</th>
</tr>
</thead>
</table>

### Availability

All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.

Contact the ASPHL prior to submitting samples 907-334-2100.

### Specimen
Serum; whole blood (EDTA); cerebrospinal fluid (CSF)

### Storage/Transport
Whole Blood (EDTA) Store refrigerated and ship with cool packs test within 1 week. All other samples store and ship frozen.

Package and label as Biological Substance, Category B, ship as quickly as possible.

### Results
Positive
Negative
Inconclusive, inadequate specimen, recollect

### Turnaround Time
7-10 days
## Diphtheriae culture

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Diphtheria</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Corynebacterium diphtheriae</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture</td>
</tr>
</tbody>
</table>
| **Specimen**     | Pure isolate  
Obtain material from the inflamed areas in the nasopharynx. If the membranes are present and can be removed, swab from beneath the membrane, in sterile saline on ice packs  
Throat, wound or nose swab |
| **Collection Container** | BBL BD CultureSwab™ EZ  
Polyester, rayon or nylon swabs in bacterial transport media such as Amies or Stuart |
| **Special Conditions** | Ship as soon as possible.                                                                         |
| **Storage/Transport** | Ambient temperature  
Package and label as Biological Specimen, Category B |
| **Results**      | *Corynebacterium diphtheriae*  
Isolated/Not Isolated  
All isolates of *C. diphtheriae*, whether toxigenic or nontoxigenic, regardless of association with disease, and from any anatomic site (respiratory, cutaneous, or other) will be sent to the CDC Diphtheria Laboratory, CDC, for confirmation and toxin testing. |
| **Turnaround Time** | 3 days |
### Ebola virus

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Ebola Virus Disease</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Ebola Virus</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Minimum of two tubes whole blood (4 mL draw required per tube)</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Contact ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Collection Container</strong></td>
<td>EDTA or sodium polyanethol sulfonate (SPS) preservative in plastic tubes</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>2-8°C ship on wet ice or cold packs Package and label as Infectious Substance, Affecting Humans UN2814 Category A, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Ebola RNA detected, Ebola RNA not detected</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1 day for testing result. If patient is tested less than 3 days after the onset of fever, retesting at 72 hours post-onset may be required.</td>
</tr>
</tbody>
</table>
# Ectoparasites

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Ectoparasites, arthropods, lice, crabs, mites, bedbugs</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Cimex lectularius</em>, <em>Pediculus capitis</em>, <em>Pediculus humanus</em>, <em>Phthirus pubis</em>, <em>Pulex irritans</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Morphological identification</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Suspect arthropod</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Comb for nits, or use forceps to pluck hair; place into clean, dry tube with secure lid.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>No Ectoparasites observed</td>
</tr>
<tr>
<td></td>
<td><em>Cimex lectularius</em> (bed bug)</td>
</tr>
<tr>
<td></td>
<td><em>Pediculus capitis</em> (head louse)</td>
</tr>
<tr>
<td></td>
<td><em>Pediculus humanus</em> (body louse)</td>
</tr>
<tr>
<td></td>
<td><em>Phthirus pubis</em> (crab louse)</td>
</tr>
<tr>
<td></td>
<td><em>Pulex irritans</em> (human flea)</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1 day</td>
</tr>
</tbody>
</table>
# Enteric stool culture

## Testing site
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

## Disease(s)
Salmonellosis, Shigellosis, Campylobacteriosis, Cholera, Foodborne illness, Food poisoning, enteric bacterial infection, Hemolytic Uremic Syndrome (HUS), bloody stool

## Organism(s)
*Salmonella*, *Shigella*, *Campylobacter*, *Escherichia coli* O157:H7, Shigatoxin producing *Escherichia coli*

**Note:** Additional testing for *Yersinia enterocolitica*, *Vibrio* species, *Aeromonas* species and *Plesiomonas* species are performed upon request.

## Test Method
Culture

**Note:** Shiga-toxin testing by EIA for Enterohemorrhagic *E. coli* is performed on all stool cultures.

## Specimen
Stool in Enteric Transport Media (ETM) Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media

## Special Conditions
- Multiple samples must be collected 24-48 hours apart.
- Specimen should not be contaminated with water, urine, barium, antibiotics or mineral oil.
- Consult laboratory if *Staphylococcus aureus*, *Bacillus cereus* or *Clostridium perfringens* are suspected.

## Specimen Collection
1. Collect stool in clean dry container or on plastic wrap stretched across toilet.
2. **Sample must be placed into ETM within one hour of sample collection.**
3. Carefully open ETM, use scoop mounted in lid to place approximately a walnut size amount of stool in to transport. Add enough stool to fill exactly to red fill line. Do not overfill.

## Storage/Transport
Ambient temperature

Package and label as Biological Specimen, Category B

## Results

<table>
<thead>
<tr>
<th>Organism</th>
<th>Isolated/Not Isolated</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Salmonella</em> spp. ~includes serotyping</td>
<td></td>
</tr>
<tr>
<td><em>Shigella</em> spp. ~includes serotyping</td>
<td></td>
</tr>
<tr>
<td><em>Campylobacter</em> spp.</td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli</em> O157</td>
<td></td>
</tr>
<tr>
<td>Non-O157 Shigatoxin producing <em>E. coli</em> ~</td>
<td></td>
</tr>
</tbody>
</table>

**Includes serotyping for O26, O45, O103, O111, O121, and O145**

Usual gram negative flora Present/No Growth

**If additional organisms are requested:**

- *Vibrio* species Isolated/Not Isolated
- *Yersinia enterocolitica* Isolated/Not Isolated
- *Aeromonas* species Isolated/Not Isolated
- *Plesiomonas shigelloides* Isolated/Not Isolated

## Turnaround Time
2 - 5 days

## Notes
A laboratory that isolates *Campylobacter*, *Salmonella*, *Shigella*, *E. coli* Shigatoxin producing, *Vibrio* or *Yersinia* species must submit an isolate or an aliquot of the original specimen to ASPHL.
Enterovirus
See Respiratory Pathogen Panel (RPP)

*Escherichia coli O157*

**Testing site**
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Disease(s)**
Hemolytic Uremic Syndrome (HUS), bloody stool

**Organism(s)**
*Escherichia coli O157*

**Test Method**
Culture and Identification
Serotyping

**Specimen**
Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media Stool in ETM (see Enteric Stool Culture)

**Storage/Transport**
Ambient temperature
Package and label as Biological Substance, Category B.

**Results**
*Escherichia coli O157*  
Isolated/Not Isolated  
2-5 days

**Notes**
Laboratories must send all suspected and/or confirmed isolates to ASPHL for confirmation and epidemiological studies.

Ethanol
See Toxic Alcohols and Glycols

Ethylene Glycol
See Toxic Alcohols and Glycols
## Fluorescent Treponemal Antibody (FTA-ABS)

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Syphilis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Treponema pallidum</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Indirect Fluorescent Antibody Confirmatory Test – FTA-ABS DS</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Serum only (non-hemolyzed, non-lipemic)</td>
</tr>
<tr>
<td></td>
<td>Plasma and CSF are NOT acceptable</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated for up to 7 days, freeze sample if testing will be delayed. Ship ambient temperature.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>FTA-ABS DS</td>
</tr>
<tr>
<td></td>
<td>Reactive/Nonreactive</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-7 days, testing performed on Wednesday. Patients previously positive at ASPHL are not retested.</td>
</tr>
<tr>
<td><strong>Francisella tularensis</strong></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Testing site</strong></td>
<td>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Tularemia, Rabbit fever, Deer-fly fever</td>
</tr>
<tr>
<td><strong>Organism</strong></td>
<td><em>Francisella tularensis</em></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Organism isolate, blood cultures, biopsy tissue, ulcer or lesion scraping or aspirate, lesion swab, sputum, bronchial/tracheal wash, serum for serological diagnosis, environmental samples</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Refer to ASM Sentinel Level Clinical Microbiology Guidelines (<a href="https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C">https://www.asm.org/Articles/Policy/Laboratory-Response-Network-(LRN)-Sentinel-Level-C</a>). Contact the ASPHL 907-334-2100.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs. Ambient temperature shipping is acceptable. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Presumptive <em>F. tularensis</em> detected/not detected</td>
</tr>
<tr>
<td></td>
<td>Confirmatory <em>F. tularensis</em> detected/not detected</td>
</tr>
<tr>
<td></td>
<td><em>Francisella tularensis</em> antibody (titer specified)</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2-7 days</td>
</tr>
</tbody>
</table>
# Giardia & Cryptosporidium

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Giardiasis, Cryptosporidiosis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Giardia, Cryptosporidium</em> species</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Direct Fluorescent Antibody (DFA) stain</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Stool in 10% Formalin and Zn-PVA Fixative (O&amp;P Collection Kit)</td>
</tr>
<tr>
<td></td>
<td>See <a href="#">Ova &amp; Parasite Exam</a></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td><em>Giardia</em> Positive/Negative</td>
</tr>
<tr>
<td></td>
<td><em>Cryptosporidium</em> Positive/Negative</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>5 days</td>
</tr>
<tr>
<td><strong>Haemophilus influenzae</strong></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Testing site</strong></td>
<td>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Bacterial Meningitis, Pneumonia, Otitis Media</td>
</tr>
<tr>
<td><strong>Organism</strong></td>
<td><em>Haemophilus species</em></td>
</tr>
<tr>
<td><strong>Specimens</strong></td>
<td>Pure isolate on chocolate agar slant Amies Transport Media with Charcoal</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ship ambient temperature. Do not freeze. Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A laboratory that isolates <em>H. influenzae</em> or <em>H. ducreyi</em> must submit an isolate or an aliquot of the original specimen to ASPHL. Samples from sterile sites can be sent directly to CDC Arctic Investigations (AIP). Samples are shared between the two labs. Contact AIP for further information at 907-729-3200.</td>
</tr>
</tbody>
</table>
# Hepatitis A virus (HAV)

**Testing site**: Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

**Disease**: Viral hepatitis by fecal-oral transmission

**Organism**: Hepatitis A virus

**Specimens**
- **Preferred** - centrifuged serum in SST (serum separator tube without additives-tiger/marble top or yellow top); **1 mL minimum**
- **Also accepted** - Centrifuged and *separated* EDTA plasma; **1 mL minimum**

**Test Method**: Enzyme immunoassay (EIA) serology – 2 assays available:
- Total hepatitis A antibodies
- Hepatitis A IgM only: indicated in symptomatic cases

**Storage/Transport**
- Store refrigerated or frozen; **indicate date shipped, and date frozen (if applicable) on the Fairbanks Requisition Form.**
- Ship on frozen packs (**preferred**), or cold packs
- *Ambient temperature shipping is not recommended per reagent manufacturer guidelines*

**Results**

<table>
<thead>
<tr>
<th></th>
<th>Hepatitis A Total Antibody</th>
<th>Reactive/Non-Reactive/Borderline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hepatitis A IgM Antibody</strong></td>
<td></td>
<td>Reactive/Non-Reactive/Borderline</td>
</tr>
</tbody>
</table>

**Turnaround Time**: 3-10 days
Hepatitis B virus (HBV)

Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

Disease
Viral Hepatitis

Organism
Hepatitis B Virus (formerly known as Serum Hepatitis)

Specimens
- Preferred - centrifuged serum in SST (serum separator tube without additives-tiger/marble top or yellow top); 2 mL minimum
- Also accepted - Centrifuged and separated EDTA plasma; 2 mL minimum

Test Method
Enzyme immunoassay (EIA) serology – 5 panels available:
- Hepatitis B: Screen (for current or past infection)
  - Core total antibody
- Hepatitis B: Immunization check
  - Core total antibody and surface antibody
- Hepatitis B: Prenatal
  - Core total antibody and surface antigen
- Hepatitis B: Symptomatic, Exposures
  - Core total antibody, surface antibody, surface antigen
- Hepatitis B: Perinatal (less than 2 years old)
  - Surface antibody and surface antigen

Note: Hepatitis B core IgM antibody is performed on all positive surface antigen specimens to differentiate acute and chronic infection

Shipping/Transport
Store refrigerated or frozen; indicate date shipped, and date frozen (if applicable) on Fairbanks Requisition Form.

Ship on frozen packs (preferred), or cold packs

Ambient temperature shipping is not recommended per reagent manufacturer guidelines

Results
Hepatitis B Virus Core Total Antibody
Reactive/Non-Reactive/Borderline

Hepatitis B Virus Core IgM Antibody
Reactive/Non-Reactive/Borderline

Hepatitis B Virus Surface Antibody
Reactive/Non-Reactive/Borderline

Hepatitis B Virus Surface Antigen
Reactive/Non-Reactive/Borderline

Turnaround Time
3-10 days
Hepatitis C virus (HCV)

ALGORITHM
All HCV test requests include the antibody screen. Reactive outcomes reflex to genotyping.

Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

Test Method(s)
Enzyme Immunoassay (EIA) serology, polymerase chain reaction (PCR)

Disease(s)
Acute or chronic contagious liver disease

Specimen
- Preferred - centrifuged serum in SST (serum separator tube without additives-tiger/marble top or yellow top); 2 mL minimum
- Also accepted - Centrifuged and separated EDTA plasma; 2 mL minimum
- Note: Collection of a separate tube for HCV testing is recommended

Storage/Transport
Store refrigerated or frozen; indicate date shipped, and date frozen (if applicable) on Fairbanks Requisition Form.
Ship on frozen packs (preferred), or cold packs
Ambient temperature shipping is not acceptable.

Serology

Results
- Non-Reactive: No antibodies to HCV detected
- Reactive: Antibodies to HCV detected. Specimens with reactive antibody results automatically reflex to HCV genotype testing

PCR - Genotyping
Results (Detected/Not detected) for each target:
- Hepatitis C RNA (qualitative)
- Type 1, subtype 1a
- Type 1, Subtype 1b
- Type 2, Subtype 2a/c
- Type 2, Subtype 2b
- Type 3
- Type 4
- Type 5
- Type 6

Turnaround Time
- Serology: 3-10 days
- PCR - Genotyping: 7-21 days
**Herpes Simplex Virus (HSV)**

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease(s)</td>
<td>Herpes, Human Herpes virus 1 and 2</td>
</tr>
<tr>
<td>Organism(s)</td>
<td>Herpes Simplex Virus Type 1, Herpes Simplex Virus Type 2</td>
</tr>
</tbody>
</table>
| CPT Code and Fee | 87529 (x2)  
*Fees charged for PCR testing only. To perform PCR testing, a memorandum of agreement (MOA) must be on file with the Alaska State Public Health Labs.* |

**Test Method(s)**

- **Serology (herpes simplex 1 and 2 antibody differentiation)**
  This is a multiplex immunoassay test used to determine immune status. Per reagent manufacturer: “The performance of this assay has not been established for use in neonates, a pediatric population (through 18 years of age), and immune-compromised patients.” If the test is used in any of these populations, the results will include the above statement.

- **Multiplex polymerase chain reaction (PCR)**
  This is a molecular test used to identify and differentiate herpes simplex virus from skin swabs.

**Serology**

- **Specimen collection**
  - Centrifuged serum in serum separator tube (SST without additives – tiger/marble top, or yellow top); **1 mL minimum**

- **Storage/Transport**
  Store serum refrigerated or frozen, and ship on frozen packs. **Ambient temperature shipping is not recommended per reagent manufacturer guidelines. Indicate date shipped, and date frozen (if applicable) on Fairbanks requisition.**

- **Results**
  - **Negative:** No IgG antibodies specific to HSV-1 and/or HSV-2 detected. Presumed not to have had previous HSV-1 and/or HSV-2 infection.
  - **Equivocal:** A borderline result. Obtain an additional specimen for retesting.
  - **Positive:** IgG antibodies specific to HSV-1 and/or HSV-2 detected.

**PCR**

- **Specimen collection**
  - Swab in Universal Transport Media (UTM, for PCR): Mouth, genital, eye, throat swab, skin. Swab the patient and place securely in 3mL UTM (or other acceptable viral transport media).

- **Storage/Transport**
  Store UTM containing the swab refrigerated or frozen, and ship on frozen packs.

- **Results**
  - **Target not detected:** No nucleic acid detected
  - **Positive:** Nucleic acid detected

**Turnaround Time**  
1-3 days after receipt at ASVL
## Human Immunodeficiency Virus (HIV)

### Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

### Disease(s)
HIV, AIDS (Acquired Immunodeficiency Syndrome)

### Organism
Human Immunodeficiency Virus

### Test Method
Testing algorithm follows current CDC guidelines for 4th generation HIV Ag/Ab Combo. **PLEASE NOTE:** For patients less than 2 yrs. old, only HIV NAT will be performed.

- **Screening:** Multiplex Immunoassay, HIV Ag/Ab combination assay
- **Confirmation:** All reactive HIV screen results reflex to the Geenius HIV 1,2 Supplemental Assay.
- **Nucleic acid testing (NAT):** Geenius confirmatory results that are inconclusive will be referred to a CDC reference lab for HIV-1 and/or HIV-2 NAT.

### Specimen
- **Preferred** - centrifuged serum in SST (serum separator tube without additives-tiger/marble top or yellow top); **2 mL minimum**
- **Also accepted** - Centrifuged and separated EDTA plasma; **2 mL minimum**

### Storage/Transport
Store refrigerated or frozen; **indicate date shipped and date frozen (if applicable)** on Fairbanks Requisition Form.

Ship on frozen packs (preferred), or cold packs.

**Note:** Specimens must be received at ASVL within 7 days of collection if stored and shipped at 2-8˚C. If a delay in shipping is anticipated, it is strongly recommended that separated serum or plasma, or centrifuged SST vacutainers be frozen at -20˚C or lower prior to shipping. Specimens received frozen between 8-14 days post collection will be tested and receive the following qualifying statement: “This specimen was received after the manufacturer’s maximum 7 day storage recommendation. Testing was performed; however, these results should be interpreted carefully with respect to clinical presentation and exposure risk. If current HIV infection or a potential recent exposure to HIV is suspected, please submit a new specimen in accordance with the defined submission guidelines.”

### Results
- **HIV Ag/Ab Combo screen**
  - Reactive/Nonreactive
- **Confirmatory Testing**
  - See interpretation of Geenius results
- **HIV-1 and HIV-2 NAT**
  - Detected/Not detected

### Turnaround Time
- **Screening and confirmation:** 1-3 days after receipt at ASVL
- **Reference lab testing (if needed):** 1-2 weeks after receipt at reference lab
Human metapneumovirus
See Respiratory Pathogen Panel (RPP)

Influenza virus

Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

Diseases
Influenza A, Influenza B

Note: Testing for novel strains of Influenza (Flu A/H5N1, Flu A/H7N9 etc.) must be approved by the Section of Epidemiology.

Business Hours: 907-269-8000; After Hours: 1-800-478-0084

Test Method
Real-time reverse-transcriptase polymerase chain reaction (rtRT-PCR)

Specimen
Preferred specimen: Nasopharyngeal (NP)
Acceptable specimens:
- Nasopharyngeal Swab(NP)*
- Tracheal Aspirate (TA)
- Dual (NP/TS)
- Nasal Swab (NS)
- Nasal Aspirate (NA)
- Nasal Wash (NW)
- Bronchoalveolar Lavage (BL)
- Lung Tissue (LT)
- Bronchial Wash (BW)

*Swabs: use synthetic material swabs only (i.e. Dacron). Cotton or calcium-alginate tips and wooden or metal shafts are not acceptable.

Collection
Collection materials are available upon request; click green button on left:
- Swab: place swab into UTM and break swab below lid line
- Wash or lavage: aseptically transfer no more than 3 mL to UTM
- Lung tissue: transfer a pea sized piece (about 1 gram) into UTM
- Be sure the cap is twisted down completely.
- Place UTM inside the biohazard bag; put Lab Request in outer pocket

Storage Transport
- Store the specimens in your refrigerator until ready to ship
- Pack samples on cool packs to preserve viral integrity
- Ship as a Biological Substance Category B UN3373
- If you are in an outlying area:
  - Use the pre-addressed Priority Mail Labels provided
  - Mail Monday or Tuesday to avoid weekends at the Post Office

Result
(Target Not Detected): Viral nucleic acid was not detected.
(Positive): Viral nucleic acid was detected.

Turnaround Time
1-3 days after receipt at ASVL
## Lead (Blood)

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Method</strong></td>
<td>Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000. Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td><strong>Screening:</strong> Capillary Stick (250 µL) <strong>Confirmation:</strong> Venous blood</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>For Capillary, collect 250 µL in blood capillary tube. For Venous collect 2 mL non-SST K₂-EDTA preserved tube (Royal Blue, Tan or Lavender top tube)</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs or ambient.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>A quantitative concentration will be reported.</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-2 days</td>
</tr>
</tbody>
</table>

See [Toxic Alcohols and Glycols](#)
# Measles (Rubeola) virus

## Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

## Disease(s)
Measles, Rubeola

## Organism(s)
Rubeola Virus

## CPT Code and Fee
87798, Fees charged for PCR testing only. To perform PCR testing, a memorandum of agreement (MOA) must be on file with the Alaska State Public Health Labs.

## Test Method(s)
- **Serology (rubeola (measles) IgG antibody)**
  This is a multiplex immunoassay test used to determine immune status. Per reagent manufacturer: “The performance of this assay has not been established for use in neonates, a pediatric population (through 18 years of age), and immune-compromised patients.” If the test is used in any of these populations, the results will include the above statement.

- **PCR (polymerase chain reaction to detect rubeola (measles) virus nucleic acid):**
  This is a molecular test used to determine the presence of the virus and therefore an active infection.

### Serology

#### Specimen Collection
- Centrifuged serum in SST (serum separator tubes – tiger top, marble top or yellow top without additives); **1 mL minimum**

#### Storage/Transport
- Store serum refrigerated or frozen; indicate date frozen (if applicable) on requisition
- Ship on frozen packs. **Ambient temperature shipping is not recommended per reagent manufacturer guidelines.**

#### Results
- **Negative**: No IgG antibodies specific to rubeola (measles) detected. No indication of previous exposure to measles virus through infection or vaccination.
- **Equivocal**: Borderline result. Obtain an additional specimen for retesting.
- **Positive**: IgG antibody to rubeola (measles) detected. May indicate exposure to measles virus via infection or vaccination.

### PCR

#### Specimen Collection
Specimens should be collected within 2 weeks of rash onset.
- Throat swab* (TS) – preferred, in 3mL Universal Transport Media (UTM) or other acceptable liquid media for viral transport
- Nasopharyngeal swab* (NP), in 3mL UTM
- Urine: 20-100mL in clean/sterile leak-proof container (not in UTM). Collect from the first part of the urine stream. The first morning void is ideal.

*Swabs: use synthetic material swabs only (i.e. Dacron). Cotton or calcium-alginate tips and wooden or metal shafts are not acceptable.

#### Storage/Transport
- Store all specimens at 4°C.
- Ship inoculated UTM and/or urine to ASVL on cool packs (4°C).

#### Results
- **Not Detected**: Rubeola virus nucleic acid was not detected.
- **Detected**: Rubeola virus nucleic acid was detected.

## Turnaround Time
1 - 3 days
## Mercury in hair

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Method</strong></td>
<td>Direct mercury analyzer</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients as requested through Section of Epidemiology</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Hair</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Sample collection kits are available from Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Complete instructions and illustrations are available at <a href="http://dhss.alaska.gov/dph/Epi/eph/Documents/biom/HairMercuryInstructions.pdf">http://dhss.alaska.gov/dph/Epi/eph/Documents/biom/HairMercuryInstructions.pdf</a></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Place the labeled zip-lock bag in a standard envelope and mail to the ASPHL, to the attention of the Chemistry section. The sample is not a considered a biological substance and is not subject to dangerous goods shipping regulations.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Quantitative mercury concentration</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1 week</td>
</tr>
</tbody>
</table>
Metals

Testing site
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

Agents
Inorganic chemical elements in urine: Beryllium, Cobalt, Molybdenum, Cadmium, Antimony, Cesium, Barium, Tungsten, Platinum, Thallium, Lead, Uranium, Arsenic, Selenium

Test Method
Inorganic elements by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

Availability
Consult with the Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours

Contact the ASPHL prior to submitting samples 907-334-2100.

Specimen
Urine

Specimen Collection
2-10 mL urine in a urine tube or leak proof screw-capped plastic specimen transport cup/tube.
Please also submit an empty, labeled specimen container from the same lot to test for background contamination.

Storage/Transport
Refrigerate and store at 4°C or below for Anchorage area delivery.
Outside of Anchorage area, freeze prior to shipment and ship with cold packs or dry ice to minimize spillage.
Package and label as Biological Substance, Category B.

Results
A quantitative concentration will be reported for each detected element.

Turnaround Time
1–2 days

Methanol

See Toxic Alcohols and Glycols
# Middle East Respiratory Syndrome Coronavirus (MERS-CoV)/Novel Coronavirus 2012

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Method</strong></td>
<td>PCR</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Respiratory Specimens: Nasopharyngeal and/or Oropharyngeal swabs, Sputum, Lower respiratory tract aspirates/washes; Serum</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated and ship with cool packs within 72 hours. &gt;72 hours, store and ship frozen. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Negative Presumptive Positive, sent to CDC for confirmation Equivocal, sent to CDC Inconclusive, inadequate specimen, recollect</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2 days</td>
</tr>
</tbody>
</table>
# Mumps virus

**Testing site**
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

**Disease(s)**
Mumps, Orchitis

**Organism**
Mumps virus

**CPT Code and Fee**
87798, Fees charged for PCR testing only. To perform PCR testing, a memorandum of agreement (MOA) must be on file with the Alaska State Public Health Labs.

## Test Methods

### Serology (mumps IgG antibody)
This is a multiplex immunoassay test used to determine immune status. Per reagent manufacturer: "The performance of this assay has not been established for use in neonates, a pediatric population (through 18 years of age), and immune-compromised patients." If the test is used in any of these populations, the results will include the above statement.

### PCR (polymerase chain reaction to detect mumps virus nucleic acid)
This is a molecular test used to determine the presence of the virus and therefore an active infection.

### Serology

#### Specimen collection
- Centrifuged serum in SST (serum separator tubes – tiger top, marble top or yellow top without additives); **1 mL minimum**

**Storage/Transport**
- Store serum refrigerated or frozen; indicate date frozen (if applicable) on Fairbanks Requisition Form.
- Ship on frozen packs. **Ambient temperature shipping is not recommended per reagent manufacturer guidelines.**

**Results**
- **Negative**: No IgG antibodies specific to mumps virus detected. Presumed not to have had previous exposure to mumps virus through infection or vaccination.
- **Equivocal**: A borderline result. Obtain an additional specimen for retesting.
- **Positive**: IgG antibody to mumps virus detected. May indicate exposure to mumps via infection or vaccination.

### PCR

#### Specimen collection
Specimens should be collected as soon as mumps is suspected.
- Buccal swab* (BS) – preferred, in universal transport media (UTM) or other acceptable liquid viral transport media.
- Throat swab*(TS), in UTM.
- Urine (50mL – 100mL) in clean/sterile leak-proof container, not in UTM. Buccal or throat swab must also be collected.

*Swabs: use synthetic material swabs only (i.e. Dacron). Cotton or calcium-alginate tips and wooden or metal shafts are not acceptable.

**Storage/Transport**
- Ship inoculated UTM and/or urine to ASVL on cool packs (4°C).

**Results**
- **Not Detected**: Mumps virus nucleic acid was not detected.
- **Detected**: Mumps virus nucleic acid was detected.

**Turnaround Time**
1 – 3 days
**Mycobacterium Culture (Tuberculosis, TB)**

**Testing site**
Alaska State Public Health Laboratory – Anchorage (907-334-2100)

**Disease(s)**
Tuberculosis (TB)

**Organism(s)**
*Mycobacterium tuberculosis* complex and other *Mycobacterium* species. For example: *M. avium/intracellulare* complex, *M. fortuitum, M. gordonae*, etc.

**Test Method**
Acid fast bacilli (AFB) smear, liquid (MGIT) and solid (7H11) culture, DNA probe confirmation, HPLC identification and drug susceptibility (TB only), TB NAAT. See [TB NAAT Information Sheet](#) for instructions on requesting testing.

**Specimen**
Sputum, bronchial wash, urine, stool, CSF, gastric lavage, blood, bone, bone marrow, tissue, body fluids and exudates.

**Specimen Collection**
- **Sputum**: 5-10 mL in sterile 50 mL conical tube with 50 mg of sodium carbonate preservative. Collect first morning specimen on three consecutive days.
- **Bronchial wash**: > 5 mL in sterile container
- **Body fluids**: > 10 -15 mL in sterile 50 mL conical tube.
- **Tissue**: In sterile container, add sterile saline to cover.

**Storage/Transport**
Store refrigerated (except for blood). Ship with cool packs. Ambient temperature shipping is acceptable.

**Specimens must be received in Alaska State Public Health Laboratory – Anchorage within 10 days of collection.**

**Results**

<table>
<thead>
<tr>
<th>AFB Smear Result</th>
<th>TB NAAT Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFB Smears not performed on blood, bone marrow, CSF, stool, or urine</td>
<td></td>
</tr>
<tr>
<td>• No AFB observed</td>
<td></td>
</tr>
<tr>
<td>• 1+, 2+, 3+, or 4+ AFB observed</td>
<td>Turnaround time: GeneXpert®- within 24 hours; TB PCR- within 72 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TB Culture Result</th>
<th>Susceptibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>No <em>Mycobacterium</em> species, including <em>M. tuberculosis</em>, isolated.</td>
<td></td>
</tr>
<tr>
<td><em>Mycobacterium tuberculosis</em> complex by DNA probe</td>
<td></td>
</tr>
<tr>
<td><em>Mycobacterium avium/intracellulare</em> complex by DNA probe</td>
<td></td>
</tr>
<tr>
<td>Other <em>Mycobacterium</em> identified by HPLC or Reference Lab</td>
<td></td>
</tr>
</tbody>
</table>

**Turnaround times:**
- Preliminary results: 3 weeks
- Negative Culture: 6 weeks (minimum)
- **Positive Culture**: As detected and confirmed

**TB Culture Result**

<table>
<thead>
<tr>
<th>Susceptibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performed on <em>M. tuberculosis</em> complex only.</td>
</tr>
<tr>
<td>First line drugs: Isoniazid, Rifampin, Ethambutol, and PZA</td>
</tr>
<tr>
<td>Panel includes Streptomycin</td>
</tr>
<tr>
<td>Susceptible/Resistant</td>
</tr>
</tbody>
</table>

**Turnaround time**: 1 to 2 weeks from identification
## Neisseria gonorrhoeae Culture

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Gonorrhea</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Neisseria gonorrhoeae</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture, DNA Probe, Beta-lactamase susceptibility</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Throat or rectal swab</td>
</tr>
<tr>
<td></td>
<td>Pure Isolate submitted on Chocolate Slant</td>
</tr>
<tr>
<td></td>
<td>Amies Transport Media with Charcoal</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>Specimens or isolates may be submitted on chocolate slants. Specimens may be collected using the InTray System or similar. Follow manufacturer instructions for incubation prior to sending.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td><em>Neisseria gonorrhoeae</em></td>
</tr>
<tr>
<td></td>
<td>Isolated/Not Isolated</td>
</tr>
<tr>
<td></td>
<td>Beta-lactamase</td>
</tr>
<tr>
<td></td>
<td>Negative/Positive</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-3 days</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A laboratory that isolates <em>N. gonorrhoeae</em> must submit an isolate or an aliquot of the original specimen to ASPHL.</td>
</tr>
</tbody>
</table>
### Neisseria meningitidis Culture

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease(s)</td>
<td>Meningitis</td>
</tr>
<tr>
<td>Organism(s)</td>
<td>Neisseria meningitidis</td>
</tr>
<tr>
<td>Test Method</td>
<td>Culture</td>
</tr>
<tr>
<td>Specimen</td>
<td>Pure isolate</td>
</tr>
<tr>
<td>Storage/Transport</td>
<td>Ambient temperature</td>
</tr>
<tr>
<td>Results</td>
<td>Neisseria meningitidis Isolated/Not Isolated</td>
</tr>
<tr>
<td>Turnaround Time</td>
<td>2–4 days</td>
</tr>
<tr>
<td>Notes</td>
<td>A laboratory that isolates <em>N. meningitidis</em> must submit an isolate or an aliquot of the original specimen to ASPHL. Samples from sterile sites can be sent directly to CDC Arctic Investigations (AIP). Samples are shared between the two labs. Contact AIP for further information at 907-729-3200.</td>
</tr>
</tbody>
</table>
## Norovirus

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Noro, Norovirus, Norwalk-like disease, epidemic viral gastroenteropathy</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Norovirus, Norwalk-like Viruses</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>PCR</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>Testing will only be completed for outbreak situations.</td>
</tr>
<tr>
<td></td>
<td><strong>Contact Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.</strong></td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Collect at least 5 mL of raw stool, vomit, or emesis in sterile container. (Specimens must NOT be submitted in UTM).</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs.</td>
</tr>
</tbody>
</table>
### Orthopox Viruses

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Pustular or vesicular rash illness</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Variola, Vaccinia (cow pox), orthopox viruses (monkeypox, camelpox, ectromelia, and gerbilpox).</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.</td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td>Contact the ASPHL prior to submitting samples 907-334-2100.</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Do NOT collect any specimens. Contact Section of Epidemiology immediately for consultation prior to specimen collection. Microscope slide touch preps, scabs, dried vesicular fluid, vesicular swabs, environmental samples.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Ship with cool packs. Ambient temperature shipping is acceptable. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Orthopox virus DNA</td>
</tr>
<tr>
<td></td>
<td>Variola virus DNA</td>
</tr>
<tr>
<td></td>
<td>Non-variola virus DNA</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2 days</td>
</tr>
<tr>
<td><strong>Ova &amp; Parasite Exam</strong></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Testing site</strong></td>
<td>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</td>
</tr>
</tbody>
</table>

**Disease(s)**

Giardiasis (beaver fever), Amebiasis, Intestinal Parasites

Rare/unusual parasites (Trichinosis, Leishmaniasis) are referred to a reference laboratory; please contact ASPHL or Epidemiology for more information.

**Organism(s)**

Protozoan and Metazoan parasites

*Trichinella* spp., *Leishmania* spp. by referral.*

**Test Method**

- Formalin ethyl-acetate concentration wet mount and Zinc-PVA Trichrome Stain Examination
- Giardia/Cryptosporidium DFA

**Special Conditions**

- Submit three samples collected 24-48 hours apart
- Specimen should not be contaminated with water, urine, barium, antibiotics or mineral oil
- Contrast media interferes with testing; delay collection until one week after procedure

**Specimen Collection**

- **Stool:** Collect stool in clean, dry container. Add stool (walnut size formed stool or \( \approx 5 \) mL of liquid) to **10% Formalin** vial (yellow top) and **Zn PVA** vial (blue top) **to red fill line only**. Do **not overfill**.

- **Worms:** Place worm in 10% Formalin (yellow top) vial or leak-proof container with normal saline to cover.

Please provide travel history if known.

**Storage/Transport**

- Ambient temperature
- Package and label as Biological Substance, Category B

**Results**

- No parasites observed
- Parasite observed(genus and species)

**Turnaround Time**

3-5 working days from date of receipt in laboratory
Parainfluenza Virus

See Respiratory Pathogen Panel (RPP)

Pertussis PCR

Testing site

Alaska State Public Health Laboratory - Anchorage (907-334-2100)

Disease(s)

Whooping cough

Organism(s)

Bordetella pertussis and Bordetella parapertussis

Test Method

Polymerase Chain Reaction (PCR)

Specimen Collection

NP swab (COPAN) in sterile dry tube.

Storage/Transport

- Ship specimen immediately at ambient temperature.
- Refrigerate PCR swab, if possible, until shipped.

Results

B. pertussis DNA

Detected/Not Detected

B. parapertussis DNA

Detected/Not Detected

Turnaround Time

PCR: 1-4 days (Testing performed on Tuesday and Thursday)
## Pulsed-Field Gel Electrophoresis (PFGE)

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Foodborne, diarrhea, nosocomial infections</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Pulsed-Field Gel Electrophoresis (PFGE) - DNA fingerprinting of bacteria</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Pure culture isolates</td>
</tr>
<tr>
<td><strong>Special Conditions</strong></td>
<td>Used for epidemiological investigation and surveillance of disease outbreaks.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>For epidemiological investigation purposes only; not to be used for diagnostic purposes. Results are reported to Epidemiology.</td>
</tr>
<tr>
<td></td>
<td>Alaska and CDC restriction enzyme pattern numbers are assigned and compared to a local and national database network, PulseNet (<a href="http://www.cdc.gov/pulsenet/">http://www.cdc.gov/pulsenet/</a>).</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>3-5 days</td>
</tr>
</tbody>
</table>
# Pinworm Exam

**Testing site**
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Disease(s)**
Pinworm

**Organism(s)**
*Enterobius vermicularis*

**Test Method**
Microscopic Examination

**Specimen Collection**
Collect sample first thing in the morning. Press the sticky side of the paddle firmly several times against the right and left perianal folds. Return paddle to transport vial, secure cap and label.

**Storage/Transport**
Ambient temperature
Package and label as Biological Substance, Category B

**Results**
Pinworm (*Enterobius vermicularis*)
Observed/Not Observed

**Turnaround Time**
1-2 days
# Plesiomonas shigelloides

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease(s)</td>
<td>Bacterial gastroenteritis</td>
</tr>
<tr>
<td>Organism(s)</td>
<td><em>Plesiomonas shigelloides</em></td>
</tr>
<tr>
<td>Test Method</td>
<td>Culture</td>
</tr>
<tr>
<td>Specimen</td>
<td>Stool in ETM (see <a href="#">Enteric Stool Culture</a>)</td>
</tr>
<tr>
<td></td>
<td>Pure isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
<tr>
<td>Special Conditions</td>
<td>Specimen should not be contaminated with water, urine, barium,</td>
</tr>
<tr>
<td></td>
<td>antibiotics or mineral oil.</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>1. Collect stool in clean dry container or on plastic wrap stretched across toilet.</td>
</tr>
<tr>
<td></td>
<td>2. Sample must be placed into ETM within one hour of sample collection.</td>
</tr>
<tr>
<td></td>
<td>3. Carefully open ETM, use scoop mounted in lid to place approximately a walnut size amount of stool in to transport. Add enough stool to fill exactly to red fill line. Do not overfill.</td>
</tr>
<tr>
<td>Storage/Transport</td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td>Results</td>
<td><em>Plesiomonas shigelloides</em></td>
</tr>
<tr>
<td></td>
<td>Isolated/Not Isolated</td>
</tr>
<tr>
<td>Turnaround Time</td>
<td>2-7 days</td>
</tr>
</tbody>
</table>
## Rabies

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Rabies, Acute Viral Encephalomyelitis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Rabies Virus</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Direct Fluorescence Assay (DFA)</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>All testing must be approved by the Section of Epidemiology 907-269-8000 during business hours and 1-800-478-0084 during non-business hours. Testing for human rabies is available from CDC with approval from Section of Epidemiology.</td>
</tr>
<tr>
<td><strong>Specimen Collection &amp; Shipping</strong></td>
<td>Wear PPE when processing specimens. No living animal will be accepted for rabies testing. For small animals, ship the entire carcass. For large animals, ship only the intact head of the animal. Refer to instructions for rabies specimen submission (click button on the left) for thorough description of specimen collection and shipping requirements. Be sure to include the Fairbanks Rabies Investigation Form with each specimen and adhere the rabies shipping label provided to the outside of the shipping container.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Rabies Virus Positive/Negative</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-4 days</td>
</tr>
</tbody>
</table>
# Reference Bacterial Culture

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture and identification</td>
</tr>
<tr>
<td><strong>Special Conditions</strong></td>
<td>If referring potential bioterrorism agent specimen for testing, please contact the Alaska State Public Health Laboratory – Anchorage (907-334-2100).</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
</tbody>
</table>
| **Storage/Transport** | Ambient temperature  
Package and label as Biological Substance, Category B. |
| **Results**      | Organism identified (genus and species)                           |
| **Turnaround Time** | 7-10 days                                                       |
| **Notes**        | Follow link for further information on submission of isolates to ASPHL:  
http://dhss.alaska.gov/dph/Epi/Pages/pubs/conditions/default.aspx |
# Respiratory Pathogen Panel (RPP)

**Testing site**  
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

**Test Method**  
Multiplex PCR (CPT code 87633)

**CPT Code and Fee**  
87633, *To receive RPP results, a memorandum of agreement (MOA) must be on file with the Alaska State Public Health Labs.*

**Targets (16 targets, 14 viral, 2 bacterial) – Luminex NxTag® RPP Assay**

- Respiratory Syncytial Virus (Groups A & B)
- Rhinovirus/Enterovirus (cannot differentiate)
- Parainfluenza (Types 1, 2, 3, and 4)
- Human metapneumovirus
- Adenovirus
- Coronavirus (HKU1, NL63, 229E, OC43)
- Human Bocavirus
- *Chlamydophila pneumoniae*
- *Mycoplasma pneumoniae*

**Specimen**

- **Preferred specimen:** Nasopharyngeal (NP), in 3mL universal transport media (UTM) or other acceptable liquid viral transport media.

  **Acceptable specimens:**
  - Nasopharyngeal Swab (NP)
  - Tracheal Aspirate (TA)
  - Dual (NP/TS)
  - Nasal Swab (NS)
  - Nasal Aspirate (NA)
  - Nasal Wash (NW)
  - Broncheoalveolar Lavage (BL)
  - Lung Tissue (LT)
  - Bronchial Wash (BW)

  **Swabs:** use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are not acceptable

**Collection**

- **Swab:** place swab into UTM and break swab below lid line
- Wash or lavage: aseptically transfer no more than 3 mL to UTM
- Lung tissue: transfer a pea sized piece (about 1 gram) into UTM
- Be sure the cap is twisted down completely.
- Place UTM inside the biohazard bag; put Lab Request in outer pocket

**Storage & Transport**

- Store the specimens in your refrigerator until ready to ship
- Pack samples on cool packs to preserve viral integrity
- Ship as a Biological Substance Category B UN3373
- If you are in an outlying area:
  - Use the pre-addressed **Priority Mail** Labels provided
  - Mail Monday or Tuesday to avoid weekends at the Post Office

**Result (for each target)**

- **Target Not Detected:** Nucleic acid was not detected
- **Positive:** Nucleic acid was detected

**Turnaround Time**  
Due to limited staff, test is performed on Monday’s only.
# Rhinovirus

See [Respiratory Pathogen Panel (RPP)](#)

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## Ricin

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory - Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Ricin poisoning</td>
</tr>
<tr>
<td><strong>Agent</strong></td>
<td>Toxin from <em>Ricinus communis</em> (castor bean plant)</td>
</tr>
</tbody>
</table>
| **Availability** | **Consult with the Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours.**  
|                  | **Contact the ASPHL prior to submitting samples 907-334-2100.**     |
| **Specimen**     | Environmental samples                                                |
| **Storage/Transport** | Store refrigerated. Ship with cool packs. Ambient temperature shipping is acceptable. Package and label as Biological Substance, Category B. |
| **Results**      | Ricin Toxin Not Detected/Detected                                   |
|                  | *Ricin communis* DNA Not Detected/Detected                           |
| **Turnaround Time** | 2-4 days                                                             |
### Ricinine

**Testing site**  
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Agents**  
Ricinine marker for ricin toxin

**Test Method**  
Liquid Chromatography/Tandem Mass Spectrometry

**Availability**  
Contact the Alaska State Public Health Laboratory – Anchorage prior to submitting specimens 907-334-2100 during business hours or after hours on-call pager (855)222-0951.

**Specimen**  
Urine

**Collection**  
Submit urine in sterile 50 mL conical tube.

**Transport**  
Store refrigerated. Ship with cool packs.

**Results**  
A quantitative concentration will be reported.
# Respiratory Syncytial Virus (RSV)

**Testing site**
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)  

**Diseases**
Respiratory Syncytial Virus

**Test Method**
PCR, see also See Respiratory Pathogen Panel (RPP)

**Specimen**
Preferred specimen: Nasopharyngeal (NP), in 3mL universal transport media (UTM) or other acceptable liquid viral transport media.  
Acceptable specimens:
- Nasopharyngeal Swab (NP)
- Tracheal Aspirate (TA)
- Dual (NP/TS)
- Nasal Swab (NS)
- Nasal Aspirate (NA)
- Nasal Wash (NW)
- Bronchoalveolar Lavage (BL)
- Lung Tissue (LT)
- Bronchial Wash (BW)

**Swabs: use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are not acceptable**

**Collection**
- Swab: place swab into UTM and break swab below lid line
- Wash or lavage: aseptically transfer no more than 3 mL to UTM
- Lung tissue: transfer a pea sized piece (about 1 gram) into UTM
- Be sure the cap is twisted down completely.
- Place UTM inside the biohazard bag; put Lab Request in outer pocket

**Storage Transport**
- Store the specimens in your refrigerator until ready to ship
- Pack samples on cool packs to preserve viral integrity
- Ship as a Biological Substance Category B UN3373
- If you are in an outlying area:
  - Use the pre-addressed Priority Mail Labels provided
  - Mail Monday or Tuesday to avoid weekends at the Post Office

**Result (for each viral target)**
- **Not Detected:** Viral nucleic acid was not detected.
- **Positive:** Viral nucleic acid was detected.

**Turnaround Time**
1-7 days after receipt at ASVL

---

## RPR (Rapid Plasma Reagin)

See Syphilis Screen – Rapid Plasma Reagin (RPR)
## Rubella

### Testing site
Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)

### Disease(s)
Rubella, German measles, Congenital Rubella Syndrome.

### Organism(s)
Rubella Virus

### Test Method

#### Serology (rubella IgG antibody)
This is a multiplex immunoassay test used to determine immune status. Per reagent manufacturer: "The performance of this assay has not been established for use in neonates, a pediatric population (through 18 years of age), and immune-compromised patients." If the test is used in any of these populations, the results will include the above statement.

#### PCR (polymerase chain reaction to detect rubella virus nucleic acid)
This is a molecular test used to determine the presence of the virus and therefore an active infection. Testing is performed at a CDC contract lab.

### Serology

#### Specimen collection
- Centrifuged serum in SST (serum separator tubes – tiger top, marble top or yellow top without additives); **1 mL minimum**

#### Storage/Transport
- Store serum refrigerated or frozen; indicate date frozen (if applicable) on Fairbanks Requisition Form.
- Ship on frozen packs. **Ambient temperature shipping is not recommended per reagent manufacturer guidelines.**

#### Results
- **Negative:** No IgG antibodies specific to rubella detected. Presumed not to have had previous exposure to rubella virus through infection or vaccination.
- **Equivocal:** A borderline result. Obtain an additional specimen for retesting.
- **Positive:** IgG antibody to rubella detected. IgG antibody levels are at a level considered to indicate positive immunity.

#### Turnaround Time
1 - 3 days

### PCR

#### Specimen Collection
- Throat swab* (TS)
- Nasopharyngeal swab* (NP)
  *Swabs: use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are not acceptable*

#### Storage/Transport
- Ship inoculated UTM to ASVL on cool packs (4°C).
- ASVL will overnight the specimen to the CDC Contract Lab.

#### Results
- **Not Detected:** Rubella virus nucleic acid was not detected.
- **Detected:** Rubella virus nucleic acid was detected.

#### Turnaround Time
2 days from date of receipt at CDC Contract Lab.
# Salmonella serotyping

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Salmonellosis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Salmonella</em> species</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture and Serotyping</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media Stool in ETM (see Enteric Stool Culture)</td>
</tr>
</tbody>
</table>
| **Storage/Transport** | Ambient temperature  
Package and label as Biological Substance, Category B |
| **Results**      | *Salmonella* serotype                                         |
| **Turnaround Time** | 2-7 days                                                      |
| **Notes**        | A laboratory that isolates *Salmonella* must submit an isolate or an aliquot of the original specimen to ASPHL. |
## Shiga-toxin testing (STEC)

<table>
<thead>
<tr>
<th>Testing site</th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Hemolytic Uremic Syndrome (HUS), bloody stool</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Shiga-toxin (I,II) producing <em>Escherichia coli</em> (STEC), <em>E. coli</em> O157, Enterohemorrhagic <em>E. coli</em> (EHEC)</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>EIA (Alere Shiga Toxin Quik Chek)</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Stool in ETM (see Enteric Stool Culture)</td>
</tr>
<tr>
<td></td>
<td>GN Broth (Gram negative/MacConkey’s broth)</td>
</tr>
<tr>
<td></td>
<td>Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature</td>
</tr>
<tr>
<td></td>
<td>Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Shigatoxin I  Positive/Negative</td>
</tr>
<tr>
<td></td>
<td>Shigatoxin II Positive/Negative</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>5 days</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A laboratory that isolates <em>E. coli</em> O157 or any Shigatoxin producing <em>E. coli</em> must submit an isolate or an aliquot of the original specimen to ASPHL.</td>
</tr>
</tbody>
</table>

Refer to Epidemiology Bulletin: Characteristics of Shiga-Toxin Producing *Escherichia coli* (STEC) Isolates — Alaska, June 2007 to December 2008 [http://www.epi.hss.state.ak.us/bulletins/docs/b2009_08.pdf](http://www.epi.hss.state.ak.us/bulletins/docs/b2009_08.pdf)
## Shigella Serotyping

**Testing site**  
Alaska State Public Health Laboratory – Anchorage (907-334-2100)

**Anchorage Requisition Form**

**Disease(s)**  
Shigellosis

**Organism(s)**  
*Shigella* species

**Test Method**  
Culture and Serotyping

**Specimen**  
Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media  
Stool in ETM (see [Enteric Stool Culture](#))

**Storage/Transport**  
Ambient temperature  
Package and label as Biological Substance, Category B*  
*Exception: Confirmed isolates of *Shigella dysenteriae*, Serogroup A must be shipped as Biological Substance Category A.

**Results**  
No *Shigella* species isolated  
*Shigella dysenteriae*, Serogroup A  
*Shigella flexneri*, Serogroup B  
*Shigella boydii*, Serogroup C  
*Shigella sonnei*, Serogroup D

**Turnaround**  
2-4 days

**Notes**  
A laboratory that isolates *Shigella* must submit an isolate or an aliquot of the original specimen to ASPHL.
# Streptococcus Isolates

**Testing site**  
Alaska State Public Health Laboratory – Anchorage (907-334-2100)

<table>
<thead>
<tr>
<th>Disease(s)</th>
<th>Various</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organism(s)</td>
<td><em>S. pyogenes</em>, <em>S. agalactiae</em>, <em>S. pneumoniae</em></td>
</tr>
<tr>
<td>Specimen</td>
<td>Pure isolate</td>
</tr>
</tbody>
</table>
| Storage/Transport | Ambient temperature  
Package and label as Biological Substance, Category B |
| Notes | A laboratory that isolates *S. agalactiae*, *S. pneumoniae* or *S. pyogenes* must submit an isolate or an aliquot of the original specimen to ASPHL.  

Samples from sterile sites can be sent directly to CDC Arctic Investigations (AIP). Samples are shared between the two labs. Contact AIP for further information at 907-729-3200.
## Syphilis Screen – Rapid Plasma Reagin (RPR)

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Syphilis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td><em>Treponema pallidum</em></td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Charcoal agglutination</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Serum 2–5 mL</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Store refrigerated. Freeze sample if delay in testing is anticipated. Ship ambient temperature. Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td></td>
<td>FTA confirmatory testing requires samples to be frozen within 7 days of collection. A new sample may be required for reactive samples if storage conditions are not met.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>RPR Reactive (with Dilutions)/Nonreactive</td>
</tr>
<tr>
<td></td>
<td>FTA-ABS automatically performed on all Reactive RPR’s unless FTA-ABS previously positive at ASPHL</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>1-2 days</td>
</tr>
</tbody>
</table>
## Toxic Alcohols & Glycols

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
</table>

### Compounds (Alternate Names)
- acetone, isopropanol (2-propanol, isopropyl alcohol, rubbing alcohol),
- methanol (methyl alcohol, wood alcohol), ethanol (ethyl alcohol),
- ethylene glycol (1,2-ethane diol, antifreeze)

### Test Method
Gas Chromatography/Mass Spectrometry. This is a two-step panel. Simple alcohols are completed first, followed by a separate glycol analysis. All compounds are tested during initial case evaluation. If follow-up testing is requested, only compounds previously reported positive are tested.

### Availability of Testing
Test is performed to support hospital emergency department determinations of Toxic Alcohol/Ethylene Glycol exposure. This test is not for routine evaluation of ethanol or acetone. Testing is available 24/7 by calling the emergency on-call #: 907-222-0951 or 855-222-0951. Follow prompts to be connected to on-call chemistry staff.

### Specimen
Whole Blood

### Specimen Collection
- Preferred Volume: 4 mL Whole Blood.
- Minimum volume: 2 mL Whole Blood.
- Preferred Tube: One 4 mL Gray top w/anticoagulant (Potassium Oxalate/Sodium Fluoride or Na2EDTA/Sodium Fluoride)
- Alternate Tube: Lavender (K2EDTA)
- Serum Separator Tubes are not acceptable.

### Storage/Transport
- Store refrigerated.
- Anchorage Area (including Mat-Su): Ship at ambient temperature.
- Outside Anchorage: Ship on cold pack if transport will take longer than 12 hrs. Contact on-call staff with Airbill number and carrier.

### Results
A quantitative concentration will be reported. Critical values are provided with report. Results are called in and faxed. The Alaska Poison Control Center is notified of positive results and is able to provide follow-up toxicology assistance.

### Turnaround Time
Test panel is complete 2-3 hours from receipt of sample.
# Trichomonas (NAAT)

**Testing Lab**
Alaska State Public Health Laboratory - Anchorage (907-334-2100)

**Disease(s)**
Trichomonas, Trichomoniasis

**Organism(s)**
*Trichomonas vaginalis* (TV)

**Test Method**
Nucleic Acid Amplification (NAAT). Target Mediated Amplification (TMA) for the detection of ribosomal RNA (rRNA) from *Trichomonas vaginalis*.

**CPT Code & Fee**
87660, To perform NAAT testing, a memorandum of agreement (MOA) must be on file with the Alaska State Public Health Labs.

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine</td>
<td></td>
<td>Urine ONLY</td>
</tr>
<tr>
<td>Vaginal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endocervical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Specimen Collection**
Gen-Probe APTIMA Combo2 Transport Tubes

**Urine Collection Kit (yellow kit):**
- First catch urine of initial urine stream; must be added to transport within 24 hours of collection.

**Multitest Swab Collection Kit (orange kit):**
- Used for Vaginal specimens
- Follow instruction provided in kit

**Unisex Swab Collection Kit (white kit):**
- Used for Endocervical specimens
- Add swabs to transport immediately.
- Do not submit white shafted cleaning swabs for testing.

**Special Conditions**
Not a test of cure. Tests that are performed less than 4-6 weeks after completion of therapy might be falsely positive due to the presence of nonviable organisms.

**Storage/Transport**
Ambient temperature

Urine specimens must be tested within 30 days of collection, swab specimens within 60 days.

**Results**
*Trichomonas vaginalis* Positive/Negative

Therapeutic failure or success cannot be determined with the APTIMA Combo 2 Assay since the nucleic acid may persist following appropriate antimicrobial therapy.

**Turnaround Time**
5 days
# Varicella Zoster Virus

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Virology Laboratory (ASVL) – Fairbanks (907-371-1000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fairbanks Requisition Form</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Chickenpox, Herpes Zoster, Varicella, Shingles</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Varicella-Zoster Virus (VZV)</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td><strong>Serology (VZV IgG antibody)</strong>&lt;br&gt;This is a multiplex immunoassay test used to determine immune status. Per reagent manufacturer: “The performance of this assay has not been established for use in neonates, a pediatric population (through 18 years of age), and immune-compromised patients.” If the test is used in any of these populations, the results will include the above statement.&lt;br&gt;<strong>PCR (polymerase chain reaction to detect VZV nucleic acid)</strong>&lt;br&gt;This is a molecular test used to determine the presence of the virus and therefore an active infection. Testing is performed at a CDC contract lab.</td>
</tr>
</tbody>
</table>

## Serology

### Specimen Collection

- Centrifuged serum in SST (serum separator tubes – tiger top, marble top or yellow top without additives); **1 mL minimum**

### Storage/Transport

- Store serum refrigerated or frozen; indicate date frozen (if applicable) on requisition
- Ship on frozen packs. *Ambient temperature shipping is not recommended per reagent manufacturer guidelines.*

### Results

- **Negative**: No IgG antibodies specific to VZV detected. Presumed not to have had previous exposure to VZV through infection or vaccination.
- **Equivocal**: A borderline result. Obtain an additional specimen for retesting.
- **Positive**: IgG antibody to VZV detected. May indicated exposure to VZV via infection or vaccination.

### Turnaround Time

1-3 days after receipt at ASVL

## PCR

### Specimen Collection

- Scabs and/or Vesicular lesion swabs* in a dry, sterile container. *Swabs: use synthetic material swabs only – cotton or calcium-alginate tips and wooden or metal shafts are not acceptable *

### Storage/Transport

- Ship specimens to ASVL at ambient temperature.
- ASVL will overnight the sample to the CDC Contract Lab.

### Results

- **Not Detected**: VZV nucleic acid was not detected.
- **Detected**: VZV nucleic acid was detected.

### Turnaround Time

2 days from date of receipt at CDC Contract Lab.
### Vibrio species

<table>
<thead>
<tr>
<th><strong>Testing Site</strong></th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Rice water diarrhea, gastroenteritis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Vibrio species</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture and Serotyping</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Stool in ETM (see <a href="#">Enteric Stool Culture</a>)&lt;br&gt;Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
<tr>
<td><strong>Special Conditions</strong></td>
<td>Specimen should not be contaminated with water, urine, barium, antibiotics or mineral oil.</td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
<td>1. Collect stool in clean dry container or on plastic wrap stretched across toilet.&lt;br&gt;2. <strong>Sample must be placed into ETM within one hour of sample collection.</strong>&lt;br&gt;3. Carefully open ETM, use scoop mounted in lid to place approximately a walnut size amount of stool in to transport. Add enough stool to fill exactly to <strong>red fill line</strong>. Do not overfill.</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td>Ambient temperature&lt;br&gt;Package and label as Biological Substance, Category B</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Not isolated&lt;br&gt;<em>Vibrio</em> (genus and species) Isolated/Not Isolated</td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
<td>2-7 days</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>A laboratory that isolates <em>Vibrio</em> must submit an isolate or an aliquot of the original specimen to ASPHL.</td>
</tr>
</tbody>
</table>
## Yersinia enterocolitica

<table>
<thead>
<tr>
<th><strong>Testing site</strong></th>
<th>Alaska State Public Health Laboratory – Anchorage (907-334-2100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease(s)</strong></td>
<td>Gastroenteritis</td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
<td>Yersinia species</td>
</tr>
<tr>
<td><strong>Test Method</strong></td>
<td>Culture</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>Stool in ETM (see Enteric Stool Culture)</td>
</tr>
<tr>
<td></td>
<td>Pure Isolate submitted on Cary Blair Swab, or Bacterial Transport Media</td>
</tr>
<tr>
<td><strong>Special Conditions</strong></td>
<td>Specimen should not be contaminated with water, urine, barium, antibiotics or mineral oil.</td>
</tr>
</tbody>
</table>
| **Specimen Collection** | 1. Collect stool in clean dry container or on plastic wrap stretched across toilet.  
2. **Sample must be placed into ETM within one hour of sample collection.**  
3. Carefully open ETM, use scoop mounted in lid to place a walnut size amount of stool in to transport. Add enough stool to fill exactly to red fill line. Do NOT overfill. |
| **Storage/Transport** | Ambient temperature  
Package and label as Biological Substance, Category B |
<p>| <strong>Results</strong>      | Yersinia (genus and species) Isolated/Not Isolated          |
| <strong>Turnaround Time</strong> | 2-7 days                                                      |
| <strong>Notes</strong>        | A laboratory that isolates Yersinia must submit an isolate or an aliquot of the original specimen to ASPHL. |</p>
<table>
<thead>
<tr>
<th><strong>Yersinia pestis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing site</strong></td>
</tr>
<tr>
<td><strong>Disease(s)</strong></td>
</tr>
<tr>
<td><strong>Organism(s)</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
</tr>
<tr>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
</tr>
<tr>
<td><strong>Results</strong></td>
</tr>
<tr>
<td><strong>Turnaround Time</strong></td>
</tr>
</tbody>
</table>
# Zika Virus

**Testing Site**
Alaska State Public Health Laboratory – Anchorage (907-334-2100)

**Test Methods**

**Serology (Zika virus IgM)**
This test is an enzyme-linked immunosorbent assay used to determine immune status.

**PCR (polymerase chain reaction to detect zika virus nucleic acid)**
This is a molecular test used to determine the presence of the virus and therefore an active infection.

**Availability**
All clients upon consultation with Section of Epidemiology 907-269-8000 during business hours or 1-800-478-0084 during non-business hours. [http://dhss.alaska.gov/dph/epi/id/pages/zika.aspx](http://dhss.alaska.gov/dph/epi/id/pages/zika.aspx)
Contact the ASPHL prior to submitting samples 907-334-2100.

<table>
<thead>
<tr>
<th><strong>Serology</strong></th>
<th><strong>PCR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specimen Collection</strong></td>
<td><strong>Specimen Collection</strong></td>
</tr>
<tr>
<td>• Serum</td>
<td>• Serum paired with: Urine; Whole Blood (EDTA); Cerebrospinal Fluid; Amniotic Fluid</td>
</tr>
<tr>
<td><strong>Storage/Transport</strong></td>
<td><strong>Storage/Transport</strong></td>
</tr>
<tr>
<td>Store and ship frozen. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
<td>Whole Blood (EDTA): Store refrigerated and ship with cool packs test within 1 week. All other samples store and ship frozen. Package and label as Biological Substance, Category B, ship as quickly as possible.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td><strong>Results</strong></td>
</tr>
<tr>
<td>• Presumptive Zika Positive; sent to CDC for confirmation</td>
<td>• Positive; sent to CDC for confirmation</td>
</tr>
<tr>
<td>• Possible Zika Positive; sent to CDC for confirmation</td>
<td>• Negative</td>
</tr>
<tr>
<td>• Presumptive Other Flavivirus Positive; sent to CDC for further testing</td>
<td>• Inconclusive, inadequate specimen, recollect</td>
</tr>
<tr>
<td>• Negative</td>
<td></td>
</tr>
</tbody>
</table>

**Turnaround Time**
7 - 10 days
Botulism Detailed Collection Instructions

Botulism testing at ASPHL is for confirmation of the presence of botulinum neurotoxin or toxin-producing Clostridia. If botulism is suspected, contact the Section of Epidemiology (907-269-8000) immediately for consultation on patient treatment.

Botulinum neurotoxin is detected in the laboratory in clinical specimens or suspect food samples. Specimens from patients treated with the heptavalent botulinum antitoxin (HBAT) will be tested.

Specimens for Botulism testing include;

- **Pre-antitoxin serum 10 mL Minimum**
  It is critical that 20 mL of blood be drawn prior to the administration of HBAT. The time the HBAT is given is required on the Anchorage Lab Request form. Be certain the actual time of blood draw appears on the tubes and Anchorage Lab Request form.

- **Stool 10 g Minimum**
  Please collect stool as soon as possible. Package without transport media. Ten grams is about the size of a walnut.

- **Gastric Contents 20 mL Minimum**
  Please collect gastric contents in sterile leak-proof container.

- **Food 10 mL oil or 10 g of solid material Minimum**
  Leave food in original containers if possible. Package in sterile leak-proof containers.

All samples must be:
- Clearly labeled
- Placed in a leak-proof container
- Sealed with parafilm (please use duct tape for sealing oil samples)
- Placed in a sealable plastic bag with absorbent material
- Placed in second sealable plastic bag with completed Anchorage Lab Request form
- Package as Biological Substance Category B specimen according to all current shipping regulations
- Shipped independently of other specimens for testing

Send Botulism samples to:

SPECIAL PATHOGENS
Alaska State Public Health Laboratory
5455 Dr. Martin Luther King Jr. Ave.
Anchorage, AK 99507

Call ASPHL at 907-334-2100 before shipping
Chlamydia & Gonorrhea Pharyngeal Swab Collection Instructions

**STEP 1**
Open UNISEX kit (white) and remove tube and package with green writing. Remove the swab with the **BLUE** shaft. **USE BLUE SHAFT SWAB ONLY.**

**STEP 2**
Instruct patient to open mouth widely. Be sure to make good contact with 5 key areas of the throat.

**STEP 3**
Remove cap from test tube. Place swab in test tube. Do not puncture the foil cap. Break swab shaft at the score mark.

**STEP 4**
Put the cap back tightly on test tube to prevent any leaking. Try not to splash the liquid out of the tube

**STEP 5**
Discard wrapper and unused tube. Label tube with patient’s name and specimen source.
Chlamydia & Gonorrhea Rectal Swab Collection Instructions

**STEP 1**
Open UNISEX kit (white) and remove tube and package with green writing. Remove the swab with the **BLUE** shaft. **USE BLUE SHAFT SWAB ONLY.**

**STEP 2**
Insert swab 1 inch into the anus and turn for 5-10 seconds. If needed, before inserting swab, wet swab with water or saline solution.

**STEP 3**
Remove cap from test tube. Place swab in test tube. Do not puncture the foil cap. Break swab shaft at the score mark.

**STEP 4**
Put the cap back tightly on test tube to prevent any leaking. Try not to splash the liquid out of the tube.

**STEP 5**
Discard wrapper and unused tube. Label tube with patient’s name and specimen source.
Chlamydia & Gonorrhea Vaginal Swab Collection Instructions (for patients)

Note: If you have any questions about this procedure, please ask your care-provider.

1. Wash your hands before starting.
2. Read these instructions carefully.
3. Open the kit package (orange) and set the tube in the cup or rack provided before beginning.
4. It is very important that the fluid in the tube does not spill. If it does spill, please ask for a new tube.

1. Partially peel open and remove the swab.

2. Hold the swab as shown, placing your thumb and forefinger in the middle of the swab shaft.

3. Carefully insert the swab into your vagina about 2 inches inside the opening of the vagina and gently rotate the swab for 10 to 30 seconds. Make sure the swab touches the walls of the vagina so that moisture is absorbed by the swab.
Withdraw the swab without touching the skin. Unscrew the cap from the tube. Do not spill the contents of the tube. Do not touch the soft tip.

Immediately place the swab into the transport tube so that the tip of the swab is visible below the tube label.

Carefully break the swab shaft at the score line against the side of the tube.

Discard the top portion of the swab.

Tightly screw the cap onto the tube. Return the tube as instructed by your care-provider.
### Interpretation of Hepatitis A & B Results

Serological Pattern of Reactivity

NOTE: A **BORDERLINE** result on any assay indicates marginal detection. This specimen falls within + 10% of the positive threshold. A follow-up specimen may be resubmitted in 2-3 weeks.

#### HEPATITIS A

<table>
<thead>
<tr>
<th>HAV Total Ab</th>
<th>HAV IgM</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-reactive</td>
<td></td>
<td>No immunity</td>
</tr>
<tr>
<td>Reactive</td>
<td>Non-Reactive</td>
<td>Immunity via HAV exposure or immunization</td>
</tr>
<tr>
<td>Reactive</td>
<td>Reactive</td>
<td>Acute HAV infection or recent immunization</td>
</tr>
</tbody>
</table>

#### HEPATITIS B

<table>
<thead>
<tr>
<th>HBcAb</th>
<th>HBsAb</th>
<th>HBsAg</th>
<th>HBcIgM</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non- Reactive</td>
<td></td>
<td></td>
<td></td>
<td>No prior HBV infection</td>
</tr>
<tr>
<td>Non- Reactive</td>
<td>Non- Reactive</td>
<td></td>
<td></td>
<td>No immunity</td>
</tr>
<tr>
<td>Non- Reactive</td>
<td>Reactive</td>
<td></td>
<td></td>
<td>Immune via vaccination; Titer &gt;10mIU/mL</td>
</tr>
<tr>
<td>Reactive</td>
<td>Reactive</td>
<td>Non- Reactive</td>
<td></td>
<td>Immune via prior resolved infection</td>
</tr>
<tr>
<td>Reactive</td>
<td>Non- Reactive</td>
<td>Non- Reactive</td>
<td></td>
<td>Convalescent window, or loss of HBsAb from resolved infection, or possible low grade chronic* infection</td>
</tr>
<tr>
<td>Non- Reactive</td>
<td>Non- Reactive</td>
<td>Reactive</td>
<td></td>
<td>Early infection</td>
</tr>
<tr>
<td>Reactive</td>
<td>Non- Reactive</td>
<td>Reactive</td>
<td>Reactive</td>
<td>Acute HBV infection</td>
</tr>
<tr>
<td>Reactive</td>
<td>Non- Reactive</td>
<td>Reactive</td>
<td>Non- Reactive</td>
<td>Chronic* HBV infection</td>
</tr>
<tr>
<td>Reactive</td>
<td>Reactive</td>
<td>Reactive</td>
<td>React/Non-React</td>
<td>Resolving Infection</td>
</tr>
</tbody>
</table>

*HBV infection is considered to be chronic when HBsAg remains reactive for six months or longer.*
## Interpretation of Hepatitis C Results

<table>
<thead>
<tr>
<th>HCV Antibody Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-reactive</td>
<td>HCV infection not indicated. If recent infection is suspected, retest in 6-7 weeks</td>
</tr>
<tr>
<td>Reactive</td>
<td>HCV Infection Indicated, reflexes to HCV Genotype test</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HCV Genotype Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV Genotype</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HCV RNA, Qualitative</th>
<th>HCV Genotype</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detected</td>
<td>Type 1, Subtype 1a</td>
<td>Valid Genotype Result</td>
</tr>
<tr>
<td></td>
<td>Type 1, Subtype 1b</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 2, Subtype 2a/c</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 2, Subtype 2b</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Any one or combination of types may be obtained</em></td>
<td></td>
</tr>
<tr>
<td>Detected</td>
<td>Not Detected</td>
<td>HCV RNA, is detected, but a genotype cannot be determined due to low virus titers (&lt;1000 IU/mL).</td>
</tr>
<tr>
<td>Detected</td>
<td>Unable to Genotype</td>
<td>Unable to determine HCV Genotype. Possible causes include, but are not limited to: Specimen contamination or degradation; poor recovery or amplification of extracted specimen; transient low viremia of HCV infection; a novel or partial genotype/subtype pattern is detected. <strong>A new specimen is recommended.</strong></td>
</tr>
<tr>
<td>Not Detected</td>
<td>Not Detected</td>
<td>HCV RNA, could not be detected due to absence of RNA, or low virus titers (&lt;100 IU/mL).</td>
</tr>
</tbody>
</table>

HCV Genotyping has been performed using the GenMark eSensor HCVg Direct Test Assay. This test has not been cleared or approved by the FDA. The performance characteristics for detecting mixed infections have not been established by the manufacturer. This assay, however, has been validated by the Alaska State Virology Laboratory using good laboratory practices, and detection of multiple targets was demonstrated.
Norovirus Detailed Collection Instructions

Norovirus outbreak testing should be pre-approved by the Section of Epidemiology. Please call the Section of Epidemiology at 907-269-8000 during business hours or 1-800-478-0084 after business hours.

Collection of Specimens
1. Section of Epidemiology will determine the number of specimens that need to be collected (usually 4-6).
2. Raw, loose, stool and vomitus are appropriate specimens to collect.
3. Collect at least 5 mL, preferably 10-50 mL of specimen.
4. Collect specimen in a clean, leak-proof container. Supplies can be obtained from Epidemiology, the Alaska State Virology Laboratory – Fairbanks or Anchorage State Public Health Laboratory.
5. Collection should begin as soon as symptoms appear, ideally within 48-72 hours of onset.
6. **DO NOT** submit samples in universal transport media (UTM).

Storage and Transport
1. Store specimens at 4°C.
2. Complete all information on the norovirus request slip. Paperwork may be obtained from Section of Epidemiology, Alaska State Virology Laboratory – Fairbanks or Anchorage.
3. Specimen containers should be individually sealed and bagged with the appropriate amount of absorbent material. (Roughly two paper towels per 50 mL.)
4. Paperwork should be separated from the specimen.
5. Specimens should be packaged and labeled as Biological Substance, Category B, and shipped in an insulated, waterproof shipping container with cool packs.
6. Arrange with Section of Epidemiology for transportation to:

   **Alaska State Virology Laboratory - Fairbanks**
   1051 Sheenjek Drive
   Or P.O. Box 60230 if sending by mail service
   Fairbanks, AK 99706-0230
   (907) 371-1000

Note: Food, water or environmental samples are not tested. Please refer any further questions to the Alaska State Virology Laboratory – Fairbanks at 907-371-1000.
Pertussis PCR: Detailed Collection Instructions

Supplies Needed: Dacron/Polyester Nasopharyngeal Swab
(Fisher # 14-906-23, 22-209-50, 23-600-952, 23-600-955 or VWR # 95041-316)
NO cotton or calcium alginate swabs will be accepted.
Anchorage Lab Request Form

Collection Instructions:
1. The nasopharyngeal (NP) swab used for collecting this sample type has a fine wire or plastic shaft.
2. One NP swab is collected for PCR as described below.
3. Remove mucus from the patient’s nose.
4. Estimate the distance to the nasopharynx. Prior to insertion of the swab, measure the distance from the corner of the nose to the front of the ear and insert the shaft ONLY half this length.
5. Carefully open package containing the NP swab and remove swab for sample collection.
6. Immobilize the patient’s head. Have the patient sit with head against a wall as there is a tendency to pull away during this procedure.

7. Gently insert the swab along the medial part of the septum, along the base of the nose, until it reaches the posterior nares. Gently rotating the swab may be helpful in insertion. If resistance is encountered, try the other nostril, as the patient may have a deviated septum.
8. Leave swab in place in nasopharynx for 10 seconds or gently rotate 3 times to acquire columnar epithelial cells and remove swab.
9. Place the NP swab back into tube or paper sleeve.
10. Seal paper sleeve with tape to allow external decontamination without compromise of specimen.
11. Clearly label the paper sleeve or tube containing the swab with patient’s name and collection date.
12. Complete the Anchorage Lab Request Form.

Transport:
1. Place NP swab in the ziploc portion of a specimen transport bag and seal. Place the completed Anchorage Lab Request form in outside pouch.
2. Package as a Biological Substance Category B specimen according to all current shipping regulations and send to the State Public Health Laboratory-Anchorage as soon as possible. If possible, hold NP swab at 4°C until transport. Ship at ambient temperature.

Note: Testing is not recommended for patients treated with antibiotics ≥ 5 days as false negative results may occur.
Rabies Specimen Submission Instructions

1. Contact the Section of Epidemiology for authorization before you send a specimen to ASVL for testing.
   - Work hours: 907-269-8000
   - After hours: 800-478-0084
2. Specimens can be submitted by health care providers, veterinarians, environmental health officers, wildlife agents, law officers or other individuals designated by the Section of Epidemiology.
3. Call ASVL before you ship an authorized specimen; tell us how you shipped it and when to expect it.
   - Work hours: 907-371-1000
   - After hours emergency contact: 855-371-1001 option #6

Conditions of Shipment

4. No living animal will be accepted for rabies testing at ASVL.
5. Small animals; whole carcasses should be submitted: (Example: cats, ferrets, mink, voles, hares and bats)
6. Large animals; only the intact head of a large animal will be accepted. (Example: dogs, wolves, bears)
   - Do not send a whole body
   - Do not attempt to remove the brain

Prepare and Pack the Specimen

7. Wear appropriate personal protective equipment (PPE) when processing the specimen.
   - If you have any questions about how to safely handle the specimen, consult the Section of Epidemiology.
8. You must surgically separate the head from the body of larger animals at the upper neck.
9. Put the specimen in 2 heavy, waterproof bags.
10. Tie each bag separately to prevent leakage.
11. Appropriately dispose of your contaminated gloves:
    - Preferred – remove your gloves and place them in the 2nd plastic bag before you tie it up.
    - Alternative – incinerate them.
12. Wash your hands thoroughly with soap and water.
13. Put the bagged specimen in a leak-proof container and place refrigerant packs around the specimen.
14. Complete the Rabies Investigation Request, place it in a plastic bag and put it in the leak-proof container.
15. Close the container and seal it securely with fibrous packing tape.
16. Specimens should be kept cold (35-45°F = 2-8°C) prior to and during shipment.
    - Ship specimens with cold packs; DO NOT use ice; it will melt during transit and make an unsafe mess.
    - Frozen specimens are acceptable; freezing will not affect the rabies assay although testing may be delayed until the specimen has thawed.
17. The carcass of a potentially infectious animal should be incinerated.
   - ASVL will incinerate the remains of all pets tested for rabies; bodies will not be returned to the owner.
Label the Container

18. All rabies specimen containers must bear the following label:

```
URGENT EXPEDITE
BIOLOGICAL SUBSTANCE CATEGORY B:  UN 3373
Packaged in compliance with IATA packing (Instruction 650)
This Package Contains an Animal Head
Keep Refrigerated

Call the Alaska State Virology Laboratory
Business Hours: 907-371-1000; After Hours: 855-371-1001 option #6
```

You can download this label from the ASPHL website at:

Decide how you will ship the specimen and address it accordingly

19. We prefer you ship by Goldstreak, or other Air Special Package Service using the address below. ASVL will pick the specimen up at the designated airline location.

```
Alaska State Virology Laboratory
1051 Sheenjek Dr.
UAF Campus, Fairbanks, AK 99775

Business Hours: 907-371-1000; After Hours: 855-371-1001 option #6
```

20. If you must ship via US Mail, please use Priority or Express Mail and the address below.

```
Alaska State Virology Laboratory
P.O. Box 60230
Fairbanks, AK 99706-0230

Business Hours: 907-371-1000; After Hours: 855-371-1001 option #6
```

Notes:

- Shipments must be PREPAID unless prior arrangements have been made with the Section of Epidemiology.
- ASVL will call results to the submitter and the Section of Epidemiology on all POSITIVE animal heads and on ALL HUMAN EXPOSURE cases within 24-48 hours of specimen receipt.
- A copy of the results will be mailed to the submitter as soon as possible.

As usual, please feel free to contact ASVL if you have any questions about testing.
Stool Culture and Parasitology Detailed Collection Instructions

Please read all directions first and follow them carefully.
You have been asked to collect a stool sample for laboratory analysis. The collection set may contain 1 to 4 vials. One of the vials may be empty (contains no liquid).

1. **You will need:**
   - Gloves
   - A clean, dry container (like a margarine tub) or plastic wrap to stretch across the toilet to collect the stool.
   - Transport container(s): Your provider will give you the appropriate containers.
     - Red Top Vial: for Bacteria like *Salmonella* or *Escherichia coli*
     - Yellow and blue Top Vials: for Parasites like *Giardia*
     - Leak Proof container: for Viruses like Norovirus
   - Pen or marker to label the transport containers

2. **Please wash your hands before collecting the stool sample.**
   - Do not pass the specimen into the toilet.
   - Do not pass the specimen directly into the collection vial.
   - Do not urinate on the specimen or into the collection vial.
   - Do not allow any water to mix with the specimen.

3. **Put on gloves. Stool can contain material that spreads infection.**

4. **Pass stool into a clean, dry container.** You can stretch plastic wrap loosely across the toilet bowl, between the seat and the base to catch the stool.
   - Either solid or liquid stool can be collected.
   - Samples from babies and young children may be collected from diapers lined with plastic wrap (if the stool is not contaminated with urine).

5. **Carefully open each vial.**
   - Use the spoon attached to the lid and collect small amounts of stool from all areas, capturing areas that are slimy, bloody or watery. If the stool is liquid, carefully pour to the fill line indicated on the container.
   - If the stool is solid, use the paddle on the container cap to scoop a walnut size amount into the vial.
   - If one vial contains no liquid, fill to at least 1/3 of the container.
   - Do not overfill the vials or mix up the vial lids.

6. **Screw the cap tightly** onto the transport container it came from. Shake the sample until the samples are well-mixed with the liquid in the vial.

7. **Remove your gloves and wash your hands.**

8. **Label all of the containers** with the patient’s first and last name, date of birth, and the collection date.

9. **Return the transport containers** as directed. Make certain that all the vials are tightly capped to avoid leaks.
Tuberculosis/ *Mycobacterium*

Specimen Collection Instructions

- Seal all specimens with Parafilm® (or similar) and store refrigerated (except blood).
- Ship samples on cool packs as Biological substances, Category B, as soon as possible.
- **Do not** use waxed containers or urine cups.
- Swabs are **not** recommended for the isolation of Mycobacteria.
- Specimens must be received in our laboratory within 10 days of collection.

**Sputum:**
Collect early morning specimens from a deep productive cough on three consecutive days, before the patient eats, drinks or takes medication. Use a separate collection tube for each day.

Have the patient rinse their mouth out with water prior to collection. Collect **5-10 mL** sputum in sterile 50 mL screw capped tubes containing sodium carbonate preservative.

**Blood:**
10 mL of blood collected in SPS (yellow top) Isolator microbial tube. **Store at room temperature.**

**Bone Marrow:**
10 mL of blood collected in SPS (yellow top) Isolator microbial tube or sterile container with sterile saline if isolator tubes are not available.

**Bronchoalveolar lavage or Bronchial washing:**
Submit 5 mL in sterile container. Avoid contaminating bronchoscope with tap water.

**Bronchial Brush/Brushing:**
Submit in sterile container with sterile saline.

**Body Fluids (Pleural, peritoneal, synovial, pericardial, etc.):**
Submit 10-15 mL in sterile 50 mL conical tubes. Add sterile anticoagulant (SPS or heparin) to body fluids if necessary. **Do not** use preservatives.

**CSF:**
Submit 2 mL in sterile container.

**Gastric Lavage/Aspirate:**
Collect 5-10 mL of gastric washing in sterile 50 mL conical tube. **Adjust pH to neutral** with 100 mg of sodium carbonate immediately following collection and note on requisition form.

**Stool:**
Submit samples in sterile 50 mL conical tubes.

**Tissue, aspirate, bone, lymph nodes, biopsy, abscess contents:**
Submit samples in sterile 50 mL conical tubes. Add sterile saline to cover specimen.

**Urine:**
Collect first morning, clean catch, urine specimens on three consecutive days. Submit 40-50 mL of urine in a sterile 50 mL sterile crew capped conical tube.
Instructions for Collecting Sputum for TB Testing

Why do I need a sputum sample?

- Your doctor needs you to collect a sputum sample to test for tuberculosis (TB) in your lungs. Checking your sputum is the best way to find out if you have TB disease or to see if your treatment is working.
- To collect an acceptable sample you need to cough up sputum from deep inside your lungs. Sputum is different than saliva (spit). Sputum comes from your lungs and is usually thick; saliva (spit) comes from your mouth and is thin and watery.
- Sputum should be collected as soon as you wake up in the morning. The laboratory needs at least 5 mL of sputum.

How to Collect a Sputum Sample

Your clinician will give you a special sputum collection tube.

1. The TB sputum collection tube must not be opened until you are ready to use it. **Do not remove** sodium carbonate preservative (white powder) from the collection tube.

2. As soon as you wake up in the morning, before you eat or drink, rinse your mouth out with WATER. **Do not use mouthwash**.

3. Take a deep breath and hold it for 5 seconds. Breathe out slowly. Take another deep breath and cough hard until some sputum comes up.

4. Cough up the sputum into the sputum collection tube.

5. Keep doing this until the sputum reaches the **5 mL** line on the collection tube, if you can.

6. Screw the orange cap on the tube tightly so it doesn't leak.

7. Wash and dry the outside of the sputum collection tube.

8. Write your **name**, **date of birth** and the **date/time** you collected the sputum on the specimen tube.

9. Put the sputum collection tube into the bag provided (store in the refrigerator until you deliver the samples to the clinician).

10. If you need to collect three sputum samples, collect them in the morning and on three different days. Do not collect more than one per day.

11. Deliver sample(s) to your clinician’s office or mail to the laboratory **as soon as possible** (samples must be received at the Anchorage laboratory for testing within 10 days of collection).

**NOTE:** Be sure you collect sputum, not saliva. If you cannot cough up sputum, try breathing steam from a hot shower.

Contact Information:

**Alaska State Public Health Laboratory:** 5455 Dr. Martin Luther King Jr. Ave, Anchorage, AK 99507 Phone: (907) 334-2100 Fax: (907) 334-2161
Alaska Tuberculosis Program: For more information about TB call the Section of Epidemiology at (907) 269-8000 or visit their website at: http://www.dhss.alaska.gov/dph/Epi/id/Pages/tb.aspx
TB NAAT Information Sheet

*Mycobacterium tuberculosis* complex NAA Testing Information Sheet

The Alaska State Public Health Laboratory (ASPHL) offers two nucleic acid amplification tests (NAAT) for the direct detection of *Mycobacterium tuberculosis* complex (MTC) in clinical specimens. The GeneXpert® Xpert® MTB/RIF Assay simultaneously identifies targeted nucleic acid sequences within the MTC and rifampin (RIF) resistance associated mutations of the *rpoB* gene in sputum. The TB PCR assay, developed and validated by the ASPHL, detects the presence of a specific insertion sequence, *IS6110*, found exclusively within members of the MTC.

These NAA tests are performed on initial smear-positive specimens. Additionally, ASPHL will perform TB NAAT on smear-negative sputum specimens from patients considered to be TB suspects upon provider request and pre-approval from the Alaska Tuberculosis Program. These tests can provide a presumptive diagnosis, which can aid in the decision of whether to begin treatment before culture results are available.

The Center for Disease Control and Prevention recommends NAAT be performed on at least one respiratory specimen from each patient with signs and symptoms of pulmonary TB for whom a diagnosis of TB is being considered but has not been established, and the test result would alter case management or TB control activities.

The cost for testing is $153 and fees for service will be billed to the facility requesting the specimen.

**Patient Criteria:**

- Patient must have signs and symptoms of pulmonary TB
- Patient must be reported to the Alaska Tuberculosis Program as a suspect TB case (907-269-8000)
- Patient must not have been diagnosed with TB or a nontuberculous mycobacterial infection or received treatment within the last 12 months

Refer to Tables 1, 2 & 3 for NAA testing algorithm and result interpretation.

---

1. NAAT: nucleic acid amplification test is a molecular technique used to detect a particular pathogen in a specimen.
2. CDC. Updated guidelines for the use of nucleic acid amplification tests in the diagnosis of tuberculosis. MMWR 2009; 58:7-10.
Table 1: GeneXpert® Xpert® MTB/RIF Result Interpretation

<table>
<thead>
<tr>
<th>Smear Result</th>
<th>MTB/RIF Assay Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smear Positive for AFB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smear Positive for AFB</td>
<td>MTB DETECTED</td>
<td>MTB target is detected within the sample. Use clinical judgment to determine whether to begin therapy while awaiting culture results. A positive NAA test does not necessarily indicate the presence of viable organisms.</td>
</tr>
<tr>
<td>Smear Positive for AFB</td>
<td>MTB Not Detected</td>
<td>MTB target is not detected within the sample. Use clinical judgment to determine whether to begin therapy while awaiting culture results. A patient is presumed to have an infection with nontuberculous mycobacteria, pending culture results. A negative MTB result on the Xpert MTB/RIF assay does not rule out pulmonary TB.</td>
</tr>
<tr>
<td><strong>Smear Negative for AFB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smear Negative for AFB</td>
<td>MTB DETECTED</td>
<td>MTB target is detected within the sample. Use clinical judgment to determine whether to begin therapy while awaiting culture results. A positive NAA test does not necessarily indicate the presence of viable organisms.</td>
</tr>
<tr>
<td>Smear Negative for AFB</td>
<td>MTB Not Detected</td>
<td>Use clinical judgment to determine whether to begin therapy while awaiting results of culture and other diagnostic tests. A negative MTB result on the Xpert MTB/RIF assay does not rule out pulmonary TB.</td>
</tr>
</tbody>
</table>

Table 2: Xpert® Rifampin Result Interpretation

<table>
<thead>
<tr>
<th>Rifampin Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIF Resistance NOT DETECTED</td>
<td>No <em>rpoB</em> mutation detected; likely rifampin susceptible.</td>
</tr>
<tr>
<td>RIF Resistance DETECTED</td>
<td><em>rpoB</em> mutation detected; likely rifampin resistant. Confirmatory testing in progress.</td>
</tr>
<tr>
<td>RIF Resistance INDETERMINATE</td>
<td>Insufficient MTB in the sample to allow determination of the <em>rpoB</em> mutation result.</td>
</tr>
</tbody>
</table>
### Table 3: ASPHL TB PCR Result Interpretation

<table>
<thead>
<tr>
<th>Smear Result</th>
<th>TB PCR Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smear Positive for AFB</td>
<td>DNA DETECTED</td>
<td>Use clinical judgment to determine whether to begin therapy while awaiting culture results. A positive NAA test does not necessarily indicate the presence of viable organisms.</td>
</tr>
<tr>
<td></td>
<td>DNA Not Detected</td>
<td>Use clinical judgment to determine whether to begin therapy while awaiting culture results. A patient is presumed to have an infection with nontuberculous mycobacteria, pending culture results. A negative TB PCR result does not rule out TB.</td>
</tr>
<tr>
<td>Smear Negative for AFB</td>
<td>DNA DETECTED</td>
<td>Use clinical judgment to determine whether to begin therapy while awaiting culture results. A positive NAA test does not necessarily indicate the presence of viable organisms.</td>
</tr>
<tr>
<td></td>
<td>DNA Not detected</td>
<td>Use clinical judgment to determine whether to begin therapy while awaiting results of culture and other diagnostic tests. A negative TB PCR result does not rule out TB.</td>
</tr>
</tbody>
</table>

*Mycobacterium tuberculosis* complex NAAT and culture results must be correlated with patient history to confirm as a case of TB infection. The GeneXpert® Xpert® MTB/RIF Assay and the ASPHL TB PCR tests detect the presence of a specific DNA sequence present in *Mycobacterium tuberculosis* complex (MTC), which includes *M. tuberculosis, M. bovis, M. bovis* BCG, *M. africanum, M. canettii, M. microti, M. caprae, M. pinnipedii, M. mungi,* and *M. orygis*. Results from TB NAA tests are not intended to be used as the sole means for clinical diagnosis or patient management decisions.

### Collection/Submission of Specimens

Refer to the Laboratory Test Directory for collection and shipping instructions.  
[http://dhss.alaska.gov/dph/Labs/Documents/LaboratoryTests.pdf](http://dhss.alaska.gov/dph/Labs/Documents/LaboratoryTests.pdf)

### Contact Information

<table>
<thead>
<tr>
<th>Alaska Tuberculosis Program</th>
<th>Rapid Telephonic Reporting</th>
<th>Alaska State Public Health Lab</th>
</tr>
</thead>
</table>
| During business hours: 907-269-8000  
After hours: 800-478-0084 | Anchorage: 907-561-4234  
Fax: 907-561-4239  
Statewide: 800-478-1800 | Main Lab line: 907-334-2100  
TB Department: 907-334-2139  
Fax: 907-334-2161 |
Viral Respiratory PCR: Detailed Collection Instructions for Nasopharyngeal Swabs

Supplies Needed: Universal Transport Media (UTM) with collection swab:
Swabs are made of synthetic or plastic materials only. Metal, wood, calcium alginate or cotton material will NOT be accepted.
Fairbanks Lab Request Form

Collection Instructions:

Please Note: The following instructions are for nasopharyngeal collection only. While nasopharyngeal swabs are preferred, other specimen types are acceptable. Please see the Respiratory Viral Panel test section in this directory for further information.

1. One NP swab is collected for PCR as described below.
2. Remove mucus from the patient’s nose.
3. Estimate the distance to the nasopharynx. Measure the distance from the corner of the nose to the front of the ear and insert the shaft ONLY half this length.
4. Carefully open package containing the NP swab and remove swab for specimen collection.
5. Immobilize the patient’s head. Have the patient sit with head against a wall as there is a tendency to pull away during this procedure.
6. Gently insert the swab along the medial part of the septum, along the base of the nose, until it reaches the posterior nares. Gently rotating the swab may be helpful in insertion. If resistance is encountered, try the other nostril, as the patient may have a deviated septum.
7. Withdraw the swab from the collection site and place it into the UTM. Carefully break the swab shaft at one of the scored lines so it fits into the UTM tube, and the cap can be securely fastened.
8. Clearly label the UTM containing the swab with patient’s name (or alternate unique identifier), date of birth and collection date. Two patient identifiers are required for specimen acceptance at ASVL.
9. Complete the Fairbanks Lab Request Form.
10. Immediately transport specimen to the laboratory. If transport is delayed, place specimen on ice or refrigerate.

Transport:
1. Place the collected specimen in the Ziploc portion of a specimen transport bag and seal. Place the completed Fairbanks Lab Request form in outside pouch.
   Package as a Biological Substance Category B specimen according to all current shipping regulations, and send to the State Public Health Laboratory-Fairbanks as soon as possible. It is preferable to hold UTM specimen at 4°C until transport. Transport specimen on cold packs.
# HIV Confirmation Result Interpretation

## Geenius Results and Further Testing Required

<table>
<thead>
<tr>
<th>Screening Assay Result</th>
<th>Geenius HIV-1 Result</th>
<th>Geenius HIV-2 Result</th>
<th>Geenius ASSAY INTERPRETATION</th>
<th>Further Testing Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeatedly Reactive</td>
<td>Negative</td>
<td>Negative</td>
<td>HIV NEGATIVE</td>
<td>HIV-1 NAT</td>
</tr>
<tr>
<td></td>
<td>Indeterminate</td>
<td>Negative</td>
<td>HIV-1 INDETERMINATE&lt;sup&gt;a&lt;/sup&gt;</td>
<td>HIV-1 NAT</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>Indeterminate</td>
<td>HIV-2 INDETERMINATE&lt;sup&gt;b&lt;/sup&gt;</td>
<td>HIV-1 NAT*</td>
</tr>
<tr>
<td></td>
<td>Indeterminate</td>
<td>Indeterminate</td>
<td>HIV INDETERMINATE&lt;sup&gt;c&lt;/sup&gt;</td>
<td>HIV-1 NAT*</td>
</tr>
<tr>
<td>Positive</td>
<td>Negative</td>
<td>HIV-1 POSITIVE</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Indeterminate</td>
<td>HIV-1 POSITIVE</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Positive</td>
<td>HIV-2 POSITIVE</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Indeterminate</td>
<td>Positive</td>
<td>HIV-2 POSITIVE</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>HIV-2 POSITIVE with HIV-1 cross reactivity</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>HIV POSITIVE Untypable (undifferentiated)</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> HIV-1 band(s) detected but did not meet the criteria for HIV-1 positive.  
<sup>b</sup> HIV-2 band(s) detected but did not meet the criteria for HIV-2 positive  
<sup>c</sup> HIV band(s) detected but did not meet the criteria for HIV-1 positive or HIV-2 positive  
*If HIV-1 NAT is negative, the sample will automatically be reflexed to HIV-2 NAT at the HIV NAT Reference Center.
Submission of isolates or source material - Laboratories

A new provision [7 AAC 27.007(e)] of the regulations effective December 29, 2013 requires submission of certain isolates or original source material to the Alaska State Public Health Laboratory (ASPHL). The purpose for this requirement is to ensure that additional characterization of isolates can be performed for public health purposes such as pulsed-field gel electrophoresis or antibiotic resistance testing. These assays can assist in detection of an outbreak and monitoring of specific pathogen strains.

A laboratory that confirms one of the pathogens in the following list shall submit isolates or aliquots of original specimens to the ASPHL:

- Bacillus anthracis
- Brucella species
- Burkholderia mallei
- Burkholderia pseudomallei
- Campylobacter species
- Clostridium botulinum, the laboratory shall provide a sample of the organism and, if available, a serum, stool, emesis, food, or environmental sample
- Clostridium tetani
- Corynebacterium diphtheriae
- Escherichia coli, shiga-like toxin producing
- Francisella tularensis
- Haemophilus ducreyi
- Haemophilus influenzae from normally sterile body fluid or site
- Listeria monocytogenes
- Mycobacterium leprae
- Mycobacterium tuberculosis
- Neisseria gonorrhoeae
- Neisseria meningitidis from normally sterile body fluid or site
- Salmonella species
- Shigella species
- Streptococcus agalactiae from normally sterile body fluid or site
- Streptococcus pneumoniae from normally sterile body fluid or site
- Streptococcus pyogenes from normally sterile body fluid or site
- Vibrio species
- Yersinia species

Additionally, if the Division of Public Health suspects or determines the existence of a situation of public health importance, including an unusual disease or outbreak, a laboratory shall submit clinical material upon request.

Isolates or aliquots of original specimens should be submitted to the ASPHL within 2 weeks of being identified.

Contact: Section of Laboratories
Telephone: 907-334-2100
Emergency Calls After Hours: 1-855-222-9918
Fax: 907-334-2161
Website: http://dhss.alaska.gov/dph/Labs/Pages/publications/default.aspx
Mail: PO Box 196093
      Anchorage, AK 99519-6093
Mumps Specimen Collection Instructions – Buccal Swabs

SUPPLIES NEEDED: UTM Kit = Universal Transport Media (UTM) with collection swab: Swabs are made of synthetic or plastic materials only. Metal, wood, calcium alginate or cotton material will NOT be acceptable. Also acceptable: any media that is specifically for the transport of viruses (VTM, M4, M5, etc.). Contact the Section of Epidemiology promptly at (907) 269-8000 or 1-800-478-0084 (after hours) if a case of mumps is suspected. Epidemiology staff are available to assist in case consultation, facilitate transport of specimens and provide public health recommendations for managing suspected or confirmed cases.

COLLECTION INSTRUCTIONS:

1. Preferred specimen: Parotid gland duct swab should be collected within nine (9) days of onset symptoms.
2. Massage the parotid (salivary) glands for 30 seconds.
3. Swab the buccal cavity, which is the space near the upper rear molars between the cheek and the teeth. Swab the area between the cheek and gum by sweeping the swab near the upper molar to the lower molar area.
4. Swabs should be placed in at least 2mL of standard viral transport medium (media whose specific use is for the transport of viruses). The swab should be broken off and left in the medium.
5. Label the sample with the patient’s full name and date of birth (absolute minimum requirements).
6. Storage and shipment: Following collection, samples should be kept cold (2° - 8°C) and shipped on cold packs within 24 hours. If there is a delay in shipment, the sample is best preserved by freezing at -70°C. Frozen samples should be shipped in a manner that allows them to remain frozen in transit.
7. Complete the Alaska State Virology Lab Request form which can be found at this website: http://www.dhss.alaska.gov/dph/Labs/Documents/publications/FbxSupplyReq.pdf. In the Epidemiological Investigations section indicate parotitis onset date and vaccination status. Check (v) Mumps virus PCR. Using the drop-down menu, select the appropriate specimen type. This paperwork must accompany the specimen for submission.

For more information on buccal swab collection, please visit the Mumps page on the CDC website at: https://www.cdc.gov/mumps/lab/detection-mumps.html