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| *Bacillus anthracis*          | Conventional & EID | • Pure culture  
• Lesion/cutaneous swab  
• CSF  
• Stool (≤ 5 g)  
• Pleural fluid  
• Transtracheal aspirate  
• Bronchial lavage  
• Whole blood (in EDTA)  
• serum  
• Plasma  
• Sputum (3-5 ml of any liquid specimen listed) | HGR or RFLT (ADPH Website) | After isolating suspected organism, send immediately. | • Consult ASM (https://www.asm.org/) for specific sentinel lab protocols.  
• Call BCL prior to shipment. | Biochemicals & PCR | 1-3 days for positive isolates from pure culture | Category A Infectious Substance  
Ship any liquid specimens on frozen cold packs. |
| Botulism (Food Samples)       | Conventional & EID | • Retain sample in original container if possible. Otherwise, use sterile techniques to collect at least 50 g of food.  
• Place sample in sterile container & seal so it does not leak.  
• Place container in secondary leak-proof container. | HGR or RFLT (ADPH Website) | Refrigerate at 2–8°C. | • Requires prior consultation with ID&O before submission.  
• Call BCL prior to shipment. | Biochemicals, ELISA, & PCR | 7-14 days | Biological Substance, Category B  
Ship on frozen cold packs.  
Ship food samples separately from clinical specimens. |
| Botulism (Clinical Specimens) | Conventional & EID | • Serum (5 ml)  
• Whole stool (10 - 50 g but will test less than 10 g if necessary)  
• Vomitus (20 ml)  
• Wound swab (in anaerobic medium such as Port-a Cul tubes)  
• Enema (20 ml)  
• Pure culture (sent anaerobically) | HGR or RFLT (ADPH Website) | Ship immediately. | • Consult ASM (https://www.asm.org/) for specific sentinel lab protocols.  
• Prior consultation with ID&O is required before submission.  
• Call BCL for specific collection instructions and prior to shipment. | Biochemicals, Mouse bioassay, & PCR | 1-14 days | Biological Substance, Category B  
Ship on frozen cold packs.  
Ship food samples separately from clinical specimens. |
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| Brucella species        | Conventional & EID | • Pure culture (chocolate agar slant or other acceptable media to support growth)  
  • Spleen tissue  
  • Liver tissue  
  • Bone marrow  
  • Joint fluid  
  • Whole blood (3-5 ml in EDTA)  
  • Serum (3-5 ml) | HGR or RFLT (ADPH Website) | After isolating suspected organism, send immediately. | • Consult ASM (https://www.asm.org/) for specific sentinel lab protocols.  
  • Call BCL prior to shipment. | Biochemicals & PCR | 2 -10 days | Infectious Substance Category A  
  Ship non-culture specimens on frozen cold packs. |
| Burkholderia mallei/pseudomallei | Conventional & EID | • Pure culture (chocolate agar slant or other acceptable media to support growth)  
  • Lesion swab  
  • Whole blood (in EDTA)  
  • Sputum  
  • Serum  
  • Urine (3-5 ml of any liquid specimen listed) | HGR or RFLT (ADPH Website) | After isolating suspected organism, send immediately. | • Consult ASM (https://www.asm.org/) for specific sentinel lab protocols.  
  • Call BCL prior to shipment. | Biochemicals & PCR | 5-7 days | Infectious Substance Category A  
  Ship non culture specimens on frozen cold packs. |
| Campylobacter species   | Conventional     | • Pure culture (CAMPY blood agar or other acceptable media to support growth)  
  • 1 teaspoon of stool (Cary-Blair transport media) | HGR or RFLT (ADPH Website) | If unable to ship after 24 hour growth, refrigerate at 2-8°C. | • Culture: Incubate pure culture for 24 hours prior to shipping.  
  • Transport media: Send with next shipment. | Biochemicals | 5–10 days | Biological Substance, Category B |
| Carbapenem-resistant Enterobacteriaceae (Includes KPC, OXA-48) | Conventional     | • Pure culture | HGR or RFLT (ADPH Website) | If unable to ship after 24 hour growth, refrigerate at 2-8°C. | • None | Biochemicals & PCR | 5–7 days | Biological Substance, Category B  
  Ship refrigerated specimens on frozen cold packs. |
| Clostridium botulinum   | See Botulism     |                                                                                  |                                      |                                                 |                                                                                     |                  |                 |                                                                                  |
| Coronavirus (MERS-CoV)  | EID             | • Nasopharyngeal swab (in viral transport media)  
  • Sputum (in sterile tube)  
  • Lower respiratory aspirate (in sterile tube)  
  • Serum (3 ml) | HGR or RFLT (ADPH Website) | Refrigerate at 2-8°C for up to 72 hours, then freeze at -20°C. | • Prior consultation with ID&O is required before submission.  
  • Do not use calcium alginate swabs. | PCR | 2-5 days | Biological Substance, Category B  
  Ship on frozen cold packs or dry ice. |
| Coxiella burnetii (Q Fever) | EID             | • Whole blood (3 ml in purple-top EDTA tube)  
  • Serum (1 ml) | RFLT (ADPH Website) | Refrigerate at 2-8°C. | None | PCR | 2–3 days | Biological Substance, Category B  
  Ship on frozen cold packs. |
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<tr>
<td>Crypto- sporidium</td>
<td>Conventional &amp; EID</td>
<td>• Stool (1 teaspoonful in Cary Blair)</td>
<td>HGR or RFLT (ADPH Website)</td>
<td>At room temperature until shipped.</td>
<td>None</td>
<td>Kinyoun acid fast stain &amp; PCR</td>
<td>3 -5 days</td>
<td>Biological Substance, Category B</td>
</tr>
<tr>
<td>Ebola virus</td>
<td>EID</td>
<td>• Whole blood (3 ml collected in purple top tube with EDTA)</td>
<td>RFLT (ADPH Website)</td>
<td>Ship immediately.</td>
<td>• Prior consultation with ID&amp;O is required before submission.</td>
<td>PCR</td>
<td>1-3 days</td>
<td>Infectious Substance Category A</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Call BCL prior to shipment.</td>
<td></td>
<td></td>
<td>Ship on frozen cold packs.</td>
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<td>• Consult CDC (<a href="https://www.cdc.gov/vhf/ebola/laboratory-personnel/index.html">https://www.cdc.gov/vhf/ebola/laboratory-personnel/index.html</a>) for specific instructions.</td>
<td></td>
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<tr>
<td>Escherichia coli (Suspected Shiga toxin producers)</td>
<td>Conventional</td>
<td>• Pure culture</td>
<td>HGR or RFLT (ADPH Website)</td>
<td>If unable to ship after 24 hour growth, refrigerate at 2–8°C.</td>
<td>Incubate pure culture for 24 hours prior to shipping.</td>
<td>Biochemicals &amp; PCR</td>
<td>7-14 days</td>
<td>E. coli 0157:H7 or suspected toxigenic strains (pure culture) – ship as Infectious Substance Category A.</td>
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<tr>
<td></td>
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<td>• Raw stool (1 teaspoon in sterile container or in Cary Blair)</td>
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<td>Raw stool shipped on frozen cold packs as Biological Substance Category B</td>
</tr>
<tr>
<td>Francisella tularensis (tularemia)</td>
<td>Conventional &amp; EID</td>
<td>• Pure culture (on chocolate agar)</td>
<td>HGR or RFLT (ADPH Website)</td>
<td>Send immediately</td>
<td>Call BCL prior to shipment.</td>
<td>Biochemicals &amp; PCR</td>
<td>7-14 days</td>
<td>Infectious Substance Category A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lesion swab</td>
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<td>Ship blood on frozen cold packs.</td>
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<tr>
<td></td>
<td></td>
<td>• Whole blood (3 ml)</td>
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<tr>
<td></td>
<td></td>
<td>• Ulcer biopsy or aspirate</td>
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<tr>
<td>Haemophilus influenzae</td>
<td>Conventional &amp; EID</td>
<td>• Pure culture from normally sterile site (chocolate agar or other acceptable media to support growth)</td>
<td>HGR or RFLT (ADPH Website)</td>
<td>If unable to ship after 24 hour growth, refrigerate at 2–8°C.</td>
<td>Incubate pure culture for 24 hours prior to shipping.</td>
<td>Biochemicals &amp; PCR</td>
<td>4-6 days</td>
<td>Biological Substance, Category B</td>
</tr>
<tr>
<td>Hantavirus</td>
<td>EID</td>
<td>• Whole Blood</td>
<td>HGR or RFLT (ADPH Website)</td>
<td>Ship immediately.</td>
<td>• Prior consultation with ID&amp;O is required before submission.</td>
<td>Referral to CDC</td>
<td>2 months</td>
<td>Ship on frozen cold packs as Infectious Substance Category A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fresh Tissue</td>
<td></td>
<td></td>
<td>• Call BCL prior to shipment.</td>
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<tr>
<td></td>
<td></td>
<td>• Serum</td>
<td></td>
<td></td>
<td>• Consult CDC (<a href="https://www.cdc.gov/hantavirus/health-care-workers/specimen-submission/protocol.html">https://www.cdc.gov/hantavirus/health-care-workers/specimen-submission/protocol.html</a>) for specific instructions.</td>
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| Influenza Type A-unsubtype-able       | EID      | • Upper and lower respiratory specimens, i.e. nasopharyngeal swab (in viral transport media)  
• NO calcium alginate swabs.        | HGR or RFLT (ADPH Website), request influenza collection and shipping kit by email at FluTestKit@adph.state.al.us | Refrigerate at 2–8°C.                                      | Contact ID&O or the BCL. See http://www.alabamapublichealth.gov/bcl/influenza-specimens.html “Influenza Specimens” for detailed instructions (Guidance for Laboratory Testing for Influenza Viruses) | PCR             | 2-5 days         | Ship on frozen cold packs as Biological Substance, Category B except on Friday & holidays. For detailed instructions see Guidance for Laboratory Testing for Influenza Viruses at http://www.alabamapublichealth.gov/bcl/influenza-specimens.html |
| Legionella species                    | Conventional | • Pure culture (buffered charcoal yeast extract with cysteine or other media to support growth)  
• Lung tissue (in saline)  
• Pleural fluid  
• Transtracheal aspirates  
• Bronchial washings  
• Sputum (Original samples in sterile container; not formalized) | HGR or RFLT (ADPH Website)                                      | If unable to ship after 24 hour growth, refrigerate at 2–8°C.  
Incubate pure culture for 24 hours prior to shipping. | Biochemicals     | 4-12 days                      | Biological Substance, Category B                                                     |
| Listeria monocytogenes                | Conventional | Pure culture                                        | HGR or RFLT (ADPH Website)                                      | If unable to ship after 24 hour growth, refrigerate culture and stool at 2–8°C.  
Incubate pure culture for 24 hours prior to shipping. | Biochemicals     | 5-7 days                      | Biological Substance, Category B                                                     |
| Neisseria meningitidis                | Conventional & EID | • Pure culture from normally sterile site          | HGR or RFLT (ADPH Website)                                      | If unable to ship after 24 hour growth, refrigerate 2–8°C.  
Incubate pure culture for 24 hours prior to shipping. | Biochemicals & PCR | 4-14 days                     | Biological Substance, Category B                                                     |
| Q Fever                               | See Coxiella burnetii |                                                                                       |                                                                                       | None             | Biochemicals & PCR                                                                 | PCR             | 5-7 days         | Biological Substance, Category B Ship refrigerated specimens on frozen cold packs. |
| Salmonella species                    | Conventional | • Pure culture  
• Stool (feces), 1 teaspoonful  
• Blood (10 ml)  
• Urine (10 ml)          | HGR or RFLT (ADPH Website)                                      | If unable to ship after 24 hour growth, refrigerate 2–8°C.  
None                                                                                 | Biochemicals & PCR | 5-7 days                      | Biological Substance, Category B Ship refrigerated specimens on frozen cold packs. |
| Shigella species                      | Conventional | • Pure culture  
• Stool (feces), 1 teaspoonful  
• Blood (10 ml)  
• Urine (10 ml)          | HGR or RFLT (ADPH Website)                                      | If unable to ship after 24 hour growth, refrigerate 2–8°C.  
None                                                                                 | Biochemicals & PCR | 5-7 days                      | Biological Substance, Category B Ship refrigerated specimens on frozen cold packs. |
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<td>Smallpox</td>
<td>See Variola virus</td>
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<td>Biological Substance, Category B</td>
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| *Streptococcus pneumoniae* | Conventional | • Pure culture from normally sterile site  
• No older than 12 years with history of vaccination | HGR or RFLT (ADPH Website) | If unable to ship after 24 hour growth, refrigerate at 2–8°C. | Incubate pure culture for 24 hours prior to shipping. | Referral to CDC or WSLH | 2 months |                                        |
| Variola virus (Smallpox) | EID    | • Lesion material  
• Swab of vesicular or pustular fluid  
• Serum (3 ml) | HGR or RFLT (ADPH Website) | Send immediately          | • Requires prior consultation with ID&O before submission.  
• Call BCL prior to shipment. | PCR | 1-3 days | Infectious Substance Category A |
| *Vibrio species*    | Conventional | • Pure culture  
• Stool (1 teaspoonful in Cary Blair) | HGR or RFLT (ADPH Website) | If unable to ship after 24 hour growth, refrigerate at 2–8°C. | Incubate pure culture for 24 hours prior to shipping. | Biochemicals | 3–8 days | Biological Substance, Category B |
| *Yersinia pestis*   | Conventional & EID | • Pure culture  
• Lymph node aspirate or biopsy  
• Bronchial or tracheal wash/aspirate or other lower respiratory tract specimen  
• Blood  
• Sputum  
• Nasopharyngeal swab | HGR or RFLT (ADPH Website) | Send immediately          | Call BCL prior to shipment | Biochemicals & PCR | 7-14 days | Infectious Substance Category A |

**Acronyms**

- ASM – American Society for Microbiology  
- CSF - Cerebrospinal Fluid  
- EDTA - Ethylenediamine Tetraacetic Acid  
- ELISA – Enzyme-linked Immunosorbent Assay  
- CDC – Centers for Disease Control and Prevention  
- CSF - Cerebrospinal Fluid  
- g - Grams  
- HGR – Horizon Generated Request  
- ID - Identification  
- ID&O – Infectious Diseases & Outbreaks Division  
- KPC – *Klebsiella pneumoniae* carbapenemase  
- ml – Milliliters  
- PCR – Polymerase Chain Reaction  
- RFLT – Requisition Form for Laboratory Testing  
- WSLH – Wisconsin State Laboratory of Hygiene