

Enteric Bacteriology Supplemental Information

The Bacteriology Section examines feces and other specimens for the presence of enteric pathogens, namely *Salmonella* serotypes, *Shigella*, *Campylobacter*, and *E.coli* O157:H7, on a routine basis. Testing for Shiga-like toxin (SLT), *Yersinia* and *Vibrio* are performed upon request.

All isolates of *Salmonella*, *Shigella*, *Campylobacter*, *E.coli* O157:H7, *Yersinia enterocolitica*, and *Vibrio* recovered from specimens by other clinical laboratories in South Dakota should be referred to the SDPHL. Referred isolates will be further characterized by various methods, such as biochemical reactions or serogrouping/serotyping, depending upon the organism. Tests for occult blood and fecal WBC counts are not performed at the SDPHL.

Specimen Collection/Labeling/Requisition Form

A. Feces specimens for *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, *E.coli* O157, *Shiga-like toxin*, *Listeria*, and *Vibrio*:

1. Feces specimens for the above agents should be collected in the appropriate culture collection kit such as a C&S kit which may have green, orange, or yellow-colored top (do not use the Parasitology O&P kit, because it contains formalin that kills bacteria). Collect freshly passed feces as soon as possible after onset of illness and before antimicrobial therapy has been initiated. Select portions of feces which contain blood or mucous, if present. Use the spoon in the lid of the collection vial to facilitate placing a portion of the feces into the vial, adding specimen only to the fill line on the vial; tighten the cap securely, and invert several times. Two to three specimens collected on different days may be necessary for diagnosis.
2. Rectal swabs containing detectable feces may be collected and placed in a culturette with Stuarts, Cary-Blair, or other commercially available transport medium (not provided by the SDPHL), if a feces specimen cannot be obtained.

1. Store and ship at 2-25° C.

B. Feces specimens for *Clostridium perfringens*, *Clostridium botulinum*, and *Bacillus cereus*:

2. For these agents, collect fresh stool specimens and place in a leak-proof, non-crushable, clean container (not provided by SDPHL).
3. For *C.perfringens* and *B.cereus*, stool specimens must be collected within 48 hours from the time symptoms begin.
4. Store and ship at 2-25° C.

C. Each stool specimen must be clearly labeled with the patient's identifier and accompanied by a properly completed accession form. The form must include the following information:

1. Patient identifier (name or number)
2. Patient birthdate
3. Date of collection
4. Agent suspected, if applicable
5. Submitter's name and address
6. Symptoms

D. Referred Cultures (for identification)

Submit an overnight, pure culture of the isolated bacteria on carbohydrate-free media (TSA and TSI are acceptable). Label tube with the patient's identifier and complete the accession form. The form must include the following information:

1. Patient identifier (name or number)
2. Patient birthdate
3. Date of collection
4. Source of specimen
5. Agents suspected
6. Submitter's name and address

The patient identifier (name, number, or both) indicated on the requisition form should match that written on the specimen or culture. Unlabeled or mismatched specimens or cultures will not be tested.

Reporting and Interpretation of Results

The following enteric pathogens, whether isolated from stool specimens or submitted as referred cultures are identified/confirmed to the species or serotype level:

Salmonella sp.

Aeromonas sp.

Shigella sp. and serotype

Vibrio sp.

Campylobacter sp.

Yersinia enterocolitica and serotype

E.coli O157:H7

STEC positive/negative and serotype

Unacceptable Specimens

1. Specimens submitted in wrong preservative, e.g., PVA or 10% formalin.
2. Raw stool in no preservative.
3. No patient identifier on specimen or culture.
4. Specimen submitted in unsuitable collection kit.
5. The specimen did not arrive in appropriate temperature transport range.