



Guidelines for Stool Testing at the CDPHE Laboratory at No Cost to the Submitter

General points:

- All specimens submitted for testing with CDPHE funds (i.e. at no cost to submitter) must be cleared by a Communicable Disease Epidemiologist before they are submitted. Submitters can call 303-692-2700 and ask to speak with a Communicable Disease Branch epidemiologist.
- Funding for norovirus testing at the CDPHE laboratory is based on grant award levels that are established annually. When CDPHE funding is available, norovirus testing can be performed in approved outbreaks (see below). Even when funding for norovirus testing is not available, CDPHE strongly recommends obtaining stool for bacterial culture during most outbreaks, as it is important to rule out bacterial (or other) pathogens.
- Norovirus testing can be performed for local public health agencies or health care facilities on a fee for service basis. As of January 2015, the cost is \$110 per specimen. Arrangements for fee for service norovirus testing can be made with the laboratory by calling: 303-692-3286. Norovirus results are usually available within 24 hours of submission. Specimens received by noon might be tested for norovirus the same day.

There are four typical scenarios in which stool testing at the CDPHE laboratory might be performed at no cost to the submitter:

1. Specimens as part of a public health investigation (not an outbreak)

- a. These are generally follow-up stool cultures for persons diagnosed with Shigella or STEC and who are in a sensitive occupation or who attend childcare. These persons are being excluded from work/child care pending negative stools. CDPHE encourages people to go to their private physicians for follow-up testing, however, the CDPHE laboratory can perform the testing if it would not otherwise be done at a clinical laboratory, in order to allow the person to return to work or child care.
- b. Testing is culture for a specific organism, unless the case has non-O157 STEC infection (in which case Shiga toxin testing must be performed).
- c. On the laboratory requisition in the comments field write "Return to work/childcare" and "Organism: _____." Include an outbreak code, if applicable.
- d. Person will be tested until 2 consecutive negatives are obtained (3 for S. Typhi).
- e. Rarely, this could include Salmonella or Campylobacter cases.

2. Foodborne or other suspected common source outbreaks (e.g. waterborne outbreaks), regardless of the setting of the outbreak:
- a. Determining etiology of foodborne/waterborne outbreaks is a priority; stool should be collected whenever possible. Try to collect 5 stools for testing.
 - b. Epidemiologists at the state or local level are always involved in these outbreaks, so specimens should generally be submitted by a local public health agency.
 - c. An outbreak code will be assigned by a CDPHE epidemiologist. The outbreak code must be written in the comments field of the laboratory requisition form. The laboratory will bill the submitting agency for services provided if no outbreak code is listed.
 - d. Local public health agencies must consult with CDPHE epidemiologists before specimens are submitted. CDPHE epidemiologists will send an e-mail to the laboratory when they learn specimens are incoming with the outbreak code, county and type of testing requested.
 - e. The CDPHE laboratory can perform **bacterial culture** (*Campylobacter*, *Salmonella*, *Shigella*, *STEC*, and *Vibrio / Yersinia*, as appropriate) at no charge to the submitter:
 - i. Stool collected within one week of symptom onset.
 - ii. Specimens can be submitted on swabs in Amies or Cary-Blair transport media.
 - iii. Stool or rectal swabs in transport media should be received by the state lab within 72 hours of collection.
 - iv. "Culture" should be selected on the requisition form.
 - f. CDPHE can also perform **norovirus RT-PCR**, when grant funding is available. {When funding is not available, local public health agencies may test for norovirus on a fee-for-service basis. In either case, please notify both CDPHE epidemiologists and laboratory staff prior to submitting specimens}:
 - i. Submit stool in bulk stool containers (or urine collection cups with a screw-cap lid), in addition to the swabs in Amies or Cary-Blair media used for culture.
 - ii. Containers must be refrigerated, not frozen, when shipped. Unpreserved stool should be received by the CDPHE laboratory within 24 hours of collection.
 - iii. Mark "PCR" and "norovirus" on requisition form.
 - iv. The order in which diagnostic tests are performed will depend on current funding levels at the CDPHE laboratory.
 - g. If **bacterial intoxication** is suspected, *Staphylococcus aureus* toxin, *Bacillus cereus* toxin and/or *Clostridium perfringens* culture/toxin testing might be performed after consultation with a CDPHE epidemiologist. Availability of these tests at the CDPHE laboratory can vary.
 - i. Stool must be collected within 24 hours of illness onset.

- ii. Submit stool in bulk stool containers and keep refrigerated. Unpreserved stool should be received by the CDPHE laboratory within 24 hours of collection.
 - iii. CDPHE staff will assist you in completing the requisition forms for these agents.
 - h. If other agents are suspected, e.g. Cryptosporidium or Giardia, these will be handled on a case-by-case basis. Submit stool in Ova and Parasite containers (blue and yellow).
3. **Outbreaks thought NOT to be common source outbreaks (e.g. person to person transmission in a child care center or school or workplace), outside of health care facilities:**
- a. Disease control is the priority.
 - b. It is important to determine if the agent is one that requires specific control measures, such as a bacterial infection or Cryptosporidium infection. Stool culture during child care center outbreaks is strongly encouraged.
 - c. Bacterial culture can be performed using CDPHE epidemiology funds. In some circumstances, Cryptosporidium testing may be indicated and will be covered under epidemiology funds.
 - d. To submit specimens for **bacterial culture** (Campylobacter, Salmonella, Shigella, STEC):
 - i. Submit no more than 5 stool specimens for culture (if positives are identified, more testing may be indicated in settings such as child care centers).
 - ii. Collected within one week of symptom onset (exceptions may be made in child care settings).
 - iii. Specimens can be submitted on swabs in Amies or Cary-Blair transport media.
 - iv. Stool or rectal swabs in transport media should be received by the CDPHE laboratory within 72 hours of collection.
 - v. "Culture" should be selected on the requisition form.
 - e. Local public health agencies that would like to test for norovirus may do so on a fee-for-service basis:
 - i. If norovirus testing will be requested, please submit stool in bulk stool containers (or urine collection cups with a screw-cap lid), in addition to the swabs in Amies or Cary-Blair media used for bacterial culture.
 - ii. Unpreserved stool should be received by the state laboratory within 24 hours of collection.
 - iii. Mark "PCR" and "norovirus." Agencies will be billed for the norovirus testing.
 - f. Epidemiologists at the state or local level are always involved in these outbreaks, so specimens should generally be submitted by a local public health agency.

- g. Local public health agencies must consult with CDPHE epidemiologists before specimens are submitted. CDPHE epidemiologists should send an e-mail to the lab when they learn specimens are incoming with the outbreak code, county and type of testing requested.
4. Health care facility outbreaks where the primary route of transmission appears to be person-to-person (i.e. NOT foodborne or waterborne)
- a. Disease control is the priority.
 - b. Follow guidance for norovirus outbreaks in long term care facilities.
 - c. Local and/or state health department epidemiologists will screen these. If the causative agent appears to be norovirus, epidemiologists will recommend the facility request norovirus testing and bacterial cultures at the laboratory of its choice. The facility will submit specimens on a fee-for-service basis.
 - d. If the agent does not appear to be norovirus (based on symptoms, duration and incubation period) epidemiology may initiate an investigation and may collect specimens for culture and norovirus testing to rule out bacterial infection.
 - e. Conversations between local and state health department epidemiologists should occur before specimens are submitted to the CDPHE laboratory. CDPHE epidemiologists will send an e-mail to the CDPHE laboratory when they learn specimens are incoming.

For general questions about laboratory testing, or permission to have testing performed using CDPHE funds, please contact one of the epidemiologists in the Communicable Disease Epidemiology Program at 303-692-2700. For technical laboratory questions, requisition forms, courier service, or to arrange fee for service testing, please contact the Laboratory Services Division at 303-692-3090. Supplies can be ordered on-line at: <https://www.colorado.gov/cdphe/lab>. Courier service pick-up sites and schedules can be found on the laboratory website or by calling 303-692-3086.