Stool Culture Specimen Collection Using FecalSwab™

Collection, Transport and Preservation System for Enteric Bacteria

The FecalSwab™ is a replacement for the current Cary Blair transport media

Clinical Background

The Copan FecalSwab (FS) Collection, Transport and Preservation System is intended for the collection of rectal swab or fecal specimens. If collected and transported according to the instructions, the system will preserve the viability of enteric pathogenic bacteria during transport from the collection site to the testing laboratory. The FecalSwab system has an intended use limited to enteric pathogenic bacteria.[1-2]

Performance

Copan FecalSwab System was able to maintain acceptable recovery of all organisms* evaluated at 2–8ºC and 20– 25ºC for 3 and 2 days respectively.

*E.coli and O157:H7, Salmonella, Shigella, Campylobacter, Yersinia, Vibrio, VRE and C. difficile

Limitations

- The product should be stored in its original container at 5 – 25°C.
- FecalSwab should not be used if any of the following apply:
  (1) There is evidence of damage or contamination to the product.
  (2) There is evidence of leakage.
  (3) The expiration date has passed.
  (4) The package is open.
  (5) There are other signs of deterioration.
- The patient should be cautioned against the use of antacids, barium, bismuth, anti-diarrheal medication, antibiotics, histamine, nonsteroidal anti-inflammatory drug or oily laxatives prior to collection of the specimen.
- Stool specimen should not contain urine or water.
- Once the sample is collected, it should be placed **immediately** into the FecalSwab transport tube medium.
- Condition, timing and volume of specimen collected for culture are significant variables in obtaining reliable culture results.
- Do not use the FecalSwab medium for pre-moistening or pre-wetting the applicator swab prior to collecting the sample.

Specimen Collection

Rectal Swab

1. Peel open the package and remove the tube of medium and the swab applicator.
2. Use the flocked swab to collect the clinical specimen. The operator must touch the swab applicator only above the marked breakpoint line (the area from the line to the end of the swab shaft), which is the opposite end to the nylon fiber tip. At all times when handling the swab applicator, the operator must not touch the area below the marked breakpoint line as this will lead to contamination of the applicator shaft and the subsequent culture thus invalidating the test results.
3. Insert the flocked swab through the rectal sphincter 2 to 3 cm (1-1.5 inches) and gently rotate.
4. Withdraw and examine to make sure there is fecal material visible on the tip.
5. After collection, transfer the swab into the tube with the preservation medium and visually check that the maximum filling line (“MAX. FILL”) indicated on the label is not exceeded. NOTE: If sample collected exceeds maximum fill line discard the swab and the tube. A second specimen should be collected using a new Copan FecalSwab kit.
6. Holding the swab shaft between thumb and finger, mash and mix the stool specimen against the side of the tube to evenly disperse and suspend the specimen in the preservation medium.
7. Hold the tube away from your face. Holding the swab shaft close to the rim of the tube, bend it at a 180 degrees angle to break it off at the marked breakpoint. If needed, gently rotate the shaft to completely remove it. Discard the broken upper part of the swab shaft and tighten the cap.
8. Shake the vial until the sample appears homogeneous
9. Write patient’s name and demographics on the tube label and send to the laboratory.

Stool Specimen

1. Have the patient obtain the stool specimen.
2. Peel open the package and remove the tube of medium and the swab applicator.
3. The operator must touch the swab applicator only above the marked breakpoint line (the area from the line to the end of the swab shaft), which is the opposite end to the nylon fiber tip. At all times when handling the swab applicator, the operator must not touch the area below the marked breakpoint line (the area from the line to the tip of the nylon flocked swab) as this will lead to contamination of the applicator shaft and the subsequent culture thus invalidating the test results.
4. Collect a small amount of stool by inserting all the tip of the flocked swab into stool sample and rotate. Bloody, slimy or watery area of stool should be selected and sampled.
5. After collection examine the swab to make sure there is fecal material visible on the tip. In case it is not, insert again the flocked swab into stool sample and rotate taking care all the area of the swab tip is in contact with the sample.
6. NOTE: the swab should not be used as a paddle or spoon but as a probe. DO NOT try to collect and transfer an excessive amount of fecal sample into the transport medium tube. The swab tip only needs to be coated with sample material.
7. After collection, transfer the swab into the tube with the preservation medium and visually check that the maximum filling line (“MAX. FILL”) indicated on the label is not exceeded. NOTE: If sample collected exceeds maximum fill line discard the swab and the tube. A second specimen should be collected using a new Copan FecalSwab kit.
8. Holding the swab shaft between thumb and finger, mash and mix the stool specimen against the side of the tube to evenly disperse and suspend the specimen in the preservation medium.
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Specimen Stability and Transport

Ambient Stability (20-25°C): Stool in FS up to 2 days
Refrigerated (2-8°C): Stool in FS up to 3 days
Frozen Stability (-20°C or lower): DO NOT FREEZE
Local Transport: FS room temperature
Long Distance: Ambient temperature (20-25°C) or 2-8°C for up to 2 or 3 days respectively in FS media before processing.

References

1. Copan FecalSwab package insert. HPC021 Rev. 00 Date 2015.04. Copan Diagnostics Inc., Murrieta, CA.
2. **Hirvonen JJ, Kaukoranta SS.** 2014. Comparison of FecalSwab and ESwab devices for storage and transportation of Diarrheagenic bacteria. Journal of clinical microbiology **52:**2334-2339.

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