Gastrointestinal Specimens

**Gastric Aspirate**

The patient should be fasting prior to the procedure. Specimens for culture are primarily submitted for mycobacteria culture on patients who are unable to produce sputum. It is recommended that the procedure be performed after the patient awakens so the sputum swallowed during sleep is still in the stomach. Notify the Microbiology Laboratory in advance of collection. Special processing procedures are required.

**Stool**

Stool samples for culture are routinely submitted for the detection of the following agents: *Salmonella, Shigella, Campylobacter, Yersinia, Vibrio, Aeromonas, E. Coli O157, Clostridium difficile*, toxin, rotavirus, Norovirus and O&P examination.

- Collect all fecal specimens prior to the administration of antibiotics and anti-diarrheal agents.
- Avoid the use of mineral oil, bismuth, and barium prior to fecal collection. All of these substances may interfere with the detection of parasitic agents.
- Collect the fecal specimen into a clean wide-mouthed container or onto a newspaper and transfer to a clean container with a tight fitting lid.
- Avoid contamination with urine or water from the toilet.
- Specimens from infants may be obtained from the diaper.
- Transport to the laboratory as soon as possible. Place those specimens that will be delayed into transport media or store at 4°C.
- Dried specimens are not acceptable.
- Do not over-fill transport containers, use the guidelines marked on the containers. Transport media may be stored at room temperature.
- Do not send stool specimens collected over a time period for culture (i.e., 24 or 72 hour collections).

**Duodenal Aspirates**

To obtain an adequate specimen for exclusion of Giardia, the tube should be at least into the third portion of the duodenum. Attach a syringe and aspirate contents. Using a sterile specimen cup, submit the specimen to the laboratory as soon as possible for examination.

**Gastric Biopsy Specimens**

- Cytologic examination:
  - Wash - Send a fresh (unfixed) wash to the laboratory. If there is a delay in transport, refrigerate the specimen until time of transit.
  - Brush - Apply brush specimens for Cytology to a clean, labeled slide. Place the specimen onto the slide by gently pressing and rolling the brush across the slide. Immediately fix the slide to prevent drying which would severely impair proper evaluation of the specimen. Spray fix the slide or place into a jar of 95% ethyl alcohol.
- Cultures - Transport biopsy tissues to the laboratory as soon as possible. Do not add preservative to these specimens. A small amount of sterile saline may be added to keep the tissue moist.
- Pathologic examination - Place tissue for pathologic examination into 10% neutral buffered formalin.

**Rectal Biopsies**

- Culture - Transport biopsy tissues for microbiology analysis to the laboratory as soon as possible. Do not add preservative to these specimens. A small amount of sterile saline may be added to keep the tissue moist.
- Pathologic examination - Place tissue for pathologic examination into 10% neutral buffered formalin.
**Small Bowel Biopsy**

Biopsies of the small intestine provide the highest diagnostic yield for *Microsporidia species*. Biopsies from other gastrointestinal areas have a much lower yield in comparison. Biopsies are obtained at the time of surgery.

- Culture - Transport tissue for microbiology analysis to the laboratory as soon as possible. Do not add preservative to these specimens. A small amount of sterile saline may be added to keep the tissue moist.
- Pathologic examination - Place tissue for pathologic examination into 10% neutral buffered formalin OR Bouin’s fixative.

**Sigmoidoscopy**

- Culture - Transport tissue or aspirate for microbiology analysis to the laboratory as soon as possible. Do not add preservative to these specimens. If biopsy samples are small, add a small amount of sterile nonbacteriostatic isotonic saline to keep the specimen from drying.
- Pathologic examination - Place tissue for pathologic examination into 10% neutral buffered formalin.