

---

**Lab Dept:** Urine/Stool

**Test Name:** STOOL PMN'S

---

***General Information***

**Lab Order Codes:** PMNS

**Synonyms:** Smear for Fecal Leukocytes; Stool WBC's; Stool PMN's; Fecal Leukocyte Smear

**CPT Codes:** 87205 – Smear, primary source with interpretation; Gram or Giemsa stain for bacteria, fungi or cell types

**Test Includes:** Smear and quantitation of leukocytes in stool.

---

***Logistics***

**Test Indications:** Useful for conditions associated with increased fecal leukocytes including antibiotic-associated colitis, ulcerative colitis, shigellosis, salmonellosis, *Campylobacter*, *Yersinia* and amoebiasis

**Lab Testing Sections:** Microbiology

**Phone Numbers:** MIN Lab: 612-813-5866

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 24 hours

**Special Instructions:** Requisition must state specific **date/time of collection**.

---

***Specimen***

**Specimen Type:** **Onsite collection:** Fresh diarrheal stool, especially with blood or mucus

**Offsite collections:**

- Zn- PVA (gray) vial form O & P preservative kit (available from Materials, Storeroom item #14574)
- Stool specimen smeared on a glass slide. See [Collection](#): procedure below for offsite locations.

**Container:** **Onsite collections:** Plastic, leakproof container  
**Offsite collections:** Zn-PVA (gray) vial or slide in slide holder. See [Special Processing](#)

**Draw Volume:**

1 gram stool, if unpreserved

0.2 grams stool, if smeared on a slide

3-5 grams stool, in Zn-PVA (gray) vial from O & P kit

**Collection:**

1. Collect fresh, diarrheal stool in a clean, dry bedpan or on a newspaper over the toilet and transfer to a plastic, leakproof container.
2. Pediatric patients with severe diarrhea may use a U-bag collection system. Place the bag over the anal area in an attempt to retrieve the specimen before it soaks into the diaper. The diaper can also be reversed with the plastic side toward the skin to prevent the specimen from soaking into the diaper. Transfer specimen into a plastic, leakproof container.
3. Those portions of stool containing blood and mucous are especially significant and should be transferred into the container.

**Special Processing:****Offsite collections:**

● **Stool preservation/fixation using ZN-PVA (gray) vial** from the O&P preservative kit. Use **ONLY** the vial containing Zn-PVA (gray cap)

**Caution:** The liquid preservative in the vials is poisonous. Handle carefully.

1. Fill gray vial by using the spoon built into the lid of the vial and transferring small scoops of stool from areas which appear bloody, slimy or watery until the contents rise to the **"Fill Here"** red line. **Do not overfill.**
2. If the stool is formed, sample small amounts from each end, sides and middle of the stool specimen.
3. Mix the contents of the vial with the spoon. Screw cap on tightly and shake the vial vigorously until the contents are well mixed. Make sure there is no leakage.
4. Label the gray vial with the patient's name, date of birth, and date/time of collection.
5. Store collected gray vial at room temperature.
6. Return collected gray vial from the stool collection kit to the laboratory within 48 hours of collection.

**OR**

● **Stool specimen smeared on a glass slide** (label with pt name and DOB)

- a. Select purulent or blood-tinged portions by using a loop or pipette. For extremely thick specimens, use care to make the prep thin (read print through the prep) so the specimen does not wash off during the staining process.
- b. Spread specimen on slide to form a thin film.

**Transport/Storage:** **Onsite collections:** Specimen must arrive in laboratory within 1 hour of collection. **Do not** send specimen through the pneumatic tube system.

**Offsite collections:** Do not refrigerate, store gray vial or glass slide at room temperature not to exceed 48 hours from the time of collection. Promptly send specimens with the next available courier. However, delayed transport causes a delay of results.

**Sample Rejection:** **No diapers accepted.** Unpreserved, fresh specimens with a transit time exceeding 2 hours after collection; multiple specimens collected on the same day; improperly labeled specimen; specimen contaminated with urine and/or water; leaking container; insufficient volume; specimen containing interfering substances such as castor oil, bismuth, Metamucil®, barium, Vaseline®, or other cream contaminants. Specimens with prolonged transit time (see [Transport/Storage](#) for requirements); specimen not submitted in appropriate transport container; insufficient volume; external contamination. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

---

### ***Interpretive***

**Reference Range:** Occasional PMN's present

**Limitations:** False-negative results may occur if patient is on antibiotics.

**Methodology:** Gram stain

**References:** Cook, JH, and M Pezzlo (1992). Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In HD Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington DC

Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Miller, J Michael, and HT Holmes (1999) Specimen Collection, Transport, and Storage In PR Murray et al, (ed), Manual of Clinical Microbiology, 7<sup>th</sup> edition, American Society for Microbiology, Washington DC, pp 33-104

**Updates:** 1/6/2014: Turnaround time previously listed as 4 hours.  
7/9/2014: Offsite collection info updated.