

OREGON HEALTH & SCIENCE UNIVERSITY  
Hospitals and Clinics  
Point of Care

**Occult Blood, Stool  
By Seracult Plus Slides**

Principle

The Occult Blood Test is a rapid screening test used to detect blood in stool. It is used to aide in the diagnosis of certain disorders where there is bleeding into the gastrointestinal tract. Generally, the bleeding is so slight that there is no change in the macroscopic appearance of the stool sample.

A small amount of stool is placed on the slide, which consists of guaiac impregnated paper. The developer is added and hemoglobin, if present, is converted to a guaiacone structure, which produces a blue dye in 30-60 seconds.

Specimen Requirements

1. Fresh stool sample.
2. Sample may be tested immediately after application or up to eight days after sample application to the test slide.
3. Do not test other sample types using the Seracult Plus Slide Kit. The kit is specific for stool samples.

Interferences

1. Bleeding from gastrointestinal lesions may be intermittent. To increase the probability of detection, three bowel movements should be tested.
2. Patients experiencing hemorrhoidal bleeding, menstrual period or bleeding from the nose and gums should delay testing for up to 48 hours after bleeding has stopped.
3. Do not use rectal suppositories or medications before sample collection.
4. The following food items and medications may cause false positives and should be discontinued at least two days prior to testing and during the testing process:
  - a. Red Meat
  - b. Iron supplements
  - c. Alcoholic Drinks
  - d. Cauliflower, turnips, broccoli
  - e. Horseradish, radishes
  - f. Cantaloupe
5. Certain oral medications may cause gastrointestinal irritation and bleeding and should be discontinued seven days prior to testing and during the testing process:
  - a. Aspirin
  - b. Indomethacin
  - c. Phenylbutazone
  - d. Corticosteroid
  - e. Reserpine

6. Ascorbic acid, in excess of 250 mg/day, may cause false negatives and should be stopped for two days before testing and throughout the testing process.
7. The interfering food items and medications should be stopped ONLY with consent of the provider.
8. The slide should not be rehydrated before applying the developer; this could result in false positives.

### Reference Range

1. Negative

### Alert Values

1. None

### Quality Control

1. Each slide contains a built-in control (Performance Control Area), which ensures the reagents and test procedure is functioning properly. Test the Performance Control Area of one slide when a new box is opened.
2. Apply a drop of developer to the Performance Control Area and read the result at 30 seconds.
3. The Performance Control Area should turn blue if the slide and developer are working properly.
4. If the Performance Control Area does not turn blue, repeat QC test using a new slide. If repeat QC fails, do not perform patient testing. Contact Point of Care at 4-5497. Document all action taken on the Quality Control (QC) logsheet in the POCT QC Logbook.
5. Record date, your initials, lot number and expiration date, and results on the QC Logsheet.

### Procedure

1. Open the cover on the front of the slide. Using a wooden applicator stick, apply a small amount of stool sample to one test area and apply another small amount of stool sample to the second test area.
2. The sample should be applied to each test area as a thin smear.

3. The stool applied to the test areas should be from different parts of the stool sample.
4. Close the cover, label the slide with the patient's name, turn the slide over, and open the window on the back.
5. Apply two drops of developer on each patient test area and one drop of developer on the Performance Control Area.
6. Read the Performance Area at 30 seconds and the patient test areas between 30-60 seconds. Do not read slide past 60 seconds or results may be invalid.
7. The Performance Control Area must be tested each time a patient test is performed.

### Results Reporting

1. Any trace of blue, in the patient test area, is positive for occult blood.
2. Do not report patient test results if the Performance Control Area does not turn blue. The patient test must be repeated using a new slide.
3. Record the patient's result in the patient chart, computer clinical record, or patient log.
4. Internal QC must be recorded with the patient result as "passed".

### Reagents

1. Seracult Plus Slides:
  - a. Are stable at room temperature (15°-30°C) until expiration date on the slide.
  - b. Do not refrigerate.
  - c. Protect from heat, sunlight, fluorescent light, and ultra-violet radiation.
  - d. Slide cards contain filter paper impregnated with natural guaiac resin.
2. Seracult Plus Developer:
  - a. Is stable at room temperature (15°-30°C) until expiration date on the bottle.
  - b. Do not refrigerate or freeze.
  - c. Protect from heat and light.
  - d. The developer is a stabilized mixture of hydrogen peroxide and ethanol.
  - e. The developer is flammable; keep away from open flame.
  - f. The developer is an irritant; avoid contact with eyes and skin.

### Reference

1. Seracult Plus Slide Kit package insert, Propper Manufacturing Co, INC. 2008