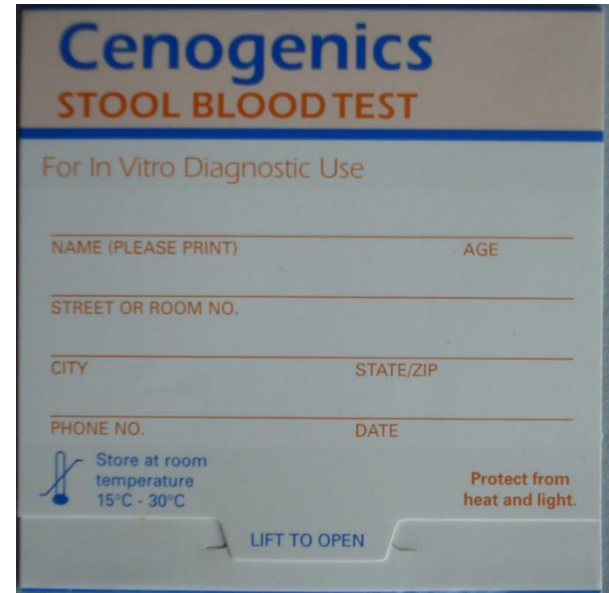# Point of Care Testing: Cenogenics Fecal Occult Blood

Purpose (Indications)

- Investigation for presence of occult (hidden) blood in stool during routine physical examination.

- Verification of suspected blood in stool in patients who are at risk for gastrointestinal bleeding or present with signs and symptoms suggestive of blood loss from the GI tract.

- **Fecal occult blood POCT is not recommended** for colorectal cancer screening, as bleeding may be intermittent. For this indication, patients should be given test cards for home use on serial samples, along with instructions and guidelines on dietary and medication restrictions before testing.
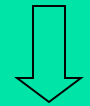
Principle

- The test card contains white paper impregnated with guaiac resin which turns blue or blue-green in the presence of hemoglobin (after adding hydrogen peroxide, H_2O_2)

- The blue color results from oxidation of guaiac by H_2O_2 (the active ingredient in the developer fluid) in the presence of heme.

- The catalytic action of heme results from its peroxidase activity – animal heme in meat and plant peroxidases in certain foods also has peroxidase activity – which explains some of the false positive reactions that can occur.

Guaiac Resin

+Heme

+H_2O_2

⇩

Blue Color

Equipment

- Cenogenics Test Slides and Developer
- Both have separate expiration dates
- Do not use either past their respective dates of expiration

Test Card

Developer Bottle

Expiration Dates Are Circled

Sample

- The Cenogenics test requires only a small fecal specimen.

- The specimen is applied to the guaiac paper of the Cenogenics slide as a **THIN SMEAR** using the applicator stick provided or gloved finger, as shown here.

- Apply sample to both box A and B when collecting fecal material from different areas

Testing

- **Wait 3-5 minutes** after applying the sample until developing the test to allow adequate time for sample to penetrate the test paper.

- Open back of slide and apply 2 drops of developer to guaiac paper directly over each smear.

- **Read results within 30 seconds** - any trace of blue or blue-green on or at the edge of the smear is positive for occult blood.

Positive Result

Quality Control

- The Quality Control dots **must** be developed on every slide.

- Apply **one drop** of Cenogenics Developer to the positive and negative Quality Control dots.

- **Read results within 30 seconds** - a blue or blue-green color in the positive quality control dot and the absence of blue in the negative quality control dot indicates that card and developer are functional.

- **Do not** record test results, unless the expected color reactions were obtained in the two Quality Control dots – this serves as documentation that QC was performed and gave expected results.

Quality Control Acceptable

Limitations

- A negative test result does not rule out intermittent bleeding or non-uniform distribution of blood in feces, and can result from high dose dietary or supplemental Vitamin C.

- A **false positive** result may be obtained on healthy persons due to dietary interferences (red meat), Aspirin, or other medications (NSAIDs, corticosteroids, anticoagulants, cancer chemotherapeutics, and others).

- **Do not use** to test gastric samples, as the normal environment of the stomach (e.g. pH) may effect test performance.

Ordering and Resulting

- **Order:**
  - OCCULT BLOOD FECES – POINT OF CARE (IP)
  - LAB07548

- **Result:**
  - While in the patient's record, selection ACTION then ENTER/EDIT RESULTS

Zztest, Smhceleven Female, 33 y.o., 01/01/1984	MRN: 772211 E#: E3990401	HAR: SMHC_11062005... Admit Dt: 05/22/15	Room, Bed: SMHCSGY,... Allergies: **Egg White [Al...**	Wt: 105 kg (2... 	CrCl: None PCP: ZZTES...	Inf: None Iso: None	Att. Prov.: VAUGHN, R Pt. Class: Medical Day...	Code: Pt FYI:

Enter/Edit Results

⬌ Filter ✖ Cancel Order ✏ Edit 📄 Scan 📇 Media Manager

Filters:	Outstanding Point of Care Testing ordered on or after 11/29/2016 (1)

No.	Test	Code Type	Order Date	Auth. MD	Order Status	Result Status	Result Date	Comp	Priority	Follow-up	Prov Stat
377268690	OCCULT BLOOD FECES - POINT OF	Custom	02/27/2017	VAUGHN, RICH	Ordered				Routine		Ordered

Order Inquiry

Resulting

- **Complete all required fields:**
  - Collected by
  - Collection Date: MM/DD/YY
  - Collection Time: HHMM
  - 'Technician' = Person Performing Test
  - 'Resulting' Provider = Person entering result if different from testing provider
  - Occult BLD Stool = Enter Test Result (positive or negative)
  - Verify QC (enter yes or no)
  - Verify card expiration date (enter yes or no)
  - If needed, enter comment
  - Result Date: MM/DD/YY
  - Result Time: HHMM
  - STATUS: CHANGE TO FINAL RESULT

Resources

- Contact your Point of Care Department for any questions/concerns