



Department of Medical Laboratory Techniques  
**parasite / practical**  
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Lecturer 2

### Collection Stool Samples Procedure:

1. When we start to collect good stool sample must a voiding contact with urine , we must keep the stool sample directly into the sterilized stool container or putting the stool into a large clean container (such as acut out milk jug) or putting the stool on the newspaper placed under the seat of the toilet . Transfer entire specimen into the stool cup using the tongue depressor or other handy implement such as a plastic spoon.
2. Label the stool container with patient's full name additional to the date and time of collection. Send the specimen to the lab within 2 hoursafter collection.



### Stool Sample Collection Methods

#### 1 - Stool Sample Collection for Pathogens Culture

Sometimes we collect the stool samples for diagnosis pathogens like pathogenic Bacteria for such purpose we must have sterilized container with transport media. The process starting by:

1. Adding the stool samples in to the container until the media rises tocover the stool sample.
2. Mix them (Stool + media) gently.
3. Label the container with the patient's name, date and time ofcollection.



**Note:** If the specimen is bloody (that mean the color of stool is red) indicate this by writing the word "bloody" on the label. We can keep stool samples for this test for 24 at room temperature.

## **2 - Stool Collection for white blood cells test (WBC)**

The presence of WBC in the stool that means there is some infection. To exam the stool samples for WBC, we do not need transport media, but there is a critical factor which is the time, we can keep stool samples in refrigerator for this test for 24 hours.

## **3 - Stool collection for Ova & Parasites.**

When we need to exam the stool sample for Parasites or Parasite's Ova, in this case we need transport media. The collection process starting by

1. Adding stool to the container with transport media until the media level immerse or cover stool sample.
2. mix gently
3. Label each container with patient's name, date and time of collection.

**Note:** We can keep these samples at room for 24 hrs.

## **4 - Stool Collection for Fecal Occult Blood Test.**

Fecal occult blood testing (FOBT) is testing that is achieved by collection of stool samples in order to detect occult blood (blood that is not visible to the naked eye) in otherwise normal - colored stool. Fecal occult blood usually is a result of slow (often intermittent) bleeding from inside the upper or lower gastrointestinal tract. We do not need transport media to perform these types of tests; just we need tiny samples of stool on a special card or cloth. The lab uses chemicals to find blood that you cannot see with the naked eye with some test kits. This test should be done every year after age 50. We can keep stool samples for this test for 24 hours in the refrigerator.



**Importance of stool analysis: -**

Stool analysis of important tests for the diagnosis of many diseases, such as:

1. Parasites and bacteria, which live in the host's body and appear in the stools.
2. 2-Gastrointestinal diseases.
3. Liver and pancreatic diseases.
4. Worms of all kinds through the vision of egg cell in the patient's stool.
- 5-Ulcerative colitis.
6. Mal-absorption and others.
7. Evaluation of diseases in the presence of diarrhea and constipation.

**Procedure for the microscopic examination of stool samples for parasites:-**

1. Place a drop of saline a clean slide.
2. Place a small piece of stool on the slide and mix with saline, cover with a cover slip. If the specimen contain mucus, the examination prefer to be done without saline. The mucus is put on the slide and covered with cover slip.
3. Examine under 10X and 40X objectives.
4. Report the presence of: Large numbers of pus cells RBCs  
Amoebas, flagellates Eggs, larvae & cysts.

Using of Saline: Normal saline (0.85%) is used for routine examination of stool samples, as it is isotonic.

Using of Iodine: Iodine is used to examine the nuclei of cysts.

Using of Eosin 1%: this provide a pink background and that will help to clear the unstained object