LABMOEBACK SU 2024

Procedures Manual

First Edition

Fecalysis (Routine Examination) Procedure

- Fecalysis is the examination of feces (better known as poop and stool). It assists in diagnosing several gastrointestinal tract conditions, including bleeding, infection by bacteria, viruses, or parasites, malabsorption, and maldigestion.

Principles

- To look for gastrointestinal infections, colon cancer, and other illnesses of a similar nature.
- To assess the presence of a parasite infection.
- To determine the reason behind loose bowel movement (LBM) or diarrhea.
- To determine the efficacy of the intestinal malabsorption treatment plan
- You can use it to determine if your body is breaking down food appropriately.

Specimen Requirements

- **Specimen Collection, Labeling, Rejection, Storage, and Transport:** The patient must collect the stool in a dry, clean, leakproof container. Check that nothing enters the container, including soil, water, urine, or other materials. Make sure that the container has the appropriate label (your full name, date, and time of collection). Reject any unlabeled stool samples with contaminants and samples stored in an unsterile container. Bring the specimen to the laboratory as soon as possible. If you cannot bring the specimen immediately, it may need to be refrigerated.
- **Submission to Central Labs:** The stool specimen must be submitted to the laboratory within two (2) hours after being collected.
- **Procedures for Microscopic Examinations:** A small specimen section should be taken and put on a microscope slide. If the stool sample is still solid, mix it with a drop or two of saline. One slide should ideally accommodate two smears, one of which can be dyed with iodine.

Reagents or Media, Supplies, Equipment

- **Reagents, Stains, or Other Materials:** Saline or Lugol's Iodine Solution
- **Storage Requirements:** Stool samples must be stored in a dry, clean, leakproof container.

Calibration (if applicable)

- After positioning the stage micrometer on the microscope stage, concentrate on the micrometer scale until you are able to differentiate between the scale's large (0.1 mm) and small (0.01 mm) divisions.
- Set the stage micrometer such that the ocular micrometer's "0" line and the stage micrometer's "0" line are superimposed.
- Locate a place as far away from the two overlaid "0" lines as you can, without adjusting the stage adjustment, where two other lines are likewise identically superimposed.
- Calculate the distance between the two superimposition points in millimeters on the stage micrometer and the number of ocular micrometer gaps.

Quality Control

- **Control Materials:** Utilize commercially available quality control materials.
- **Preparation, Handling, and Storage:** Follow manufacturer's instructions.
- **Frequency of Testing:** QC should be tested daily along with patient samples.
- **Expected Results:** Bacteria, viruses, and parasites should be visible under a microscope. Occasionally, occult blood will also be seen.
- **Corrective Actions:** When necessary, adjust reagents or recalibrate microscopes.
- **Recording and Storage of QC Data:** QC Data must be precise, up-to-date, specific, clear, and easy to understand. It may be on paper or in an electronic format. Records must be maintained and updated on a regular basis.
- **Alternatives (if no QC materials are available):** Consider following certain patient demographics as a reference range should there be no quality control materials.

Step-by-Step Instructions

- **Quantitative Testing:** N/A
- **Qualitative Testing:**
    - Examine stool specimen color, odor, and composition (mucus, blood, microorganisms, or blood cells).
- **Interpretation:** Stool specimen must be compared to the laboratory's reference ranges.

Reporting Results

- **Reference Intervals:**
    - Stool specimen should appear as brown, soft, and well-formed in consistency.
    - Must not contain blood, mucus, and harmful bacteria, viruses, fungi, or parasites.
    -

Fats	< 5g / day
Nitrogen	< 2g / day

Weight	< 200g / day
Urobilinogen	40 - 280mg / day

- **Procedures for Reporting Abnormal Results:** The pathologist will inform the patient’s attending physician immediately.
- **Reporting format:** Results should be presented in tabular format. It must include the following:
    - Date and time of collection
    - Physical Characteristics of sample
    - Microscopic examination of sample
    - Signed by the medical technologist and chief pathologist.

Procedure Notes

- **Special Precautions:** Use a BSC (BSL-2) when handling feces sample. PPE must also be used.
- **Possible Sources of Error:** Unlabeled containers, QNS stool samples, and samples not being sent to the laboratory within the given time frame.
- **Answers to Common Problems:**
    - **Problem 1:** Stool sample has been contaminated.
    - **Answer 1:** Request patient to provide a new sample.
    - **Problem 2:** Unlabeled specimen container.
    - **Answer 2:** Reject specimen. Make sure to label every container to prevent this mistake.

Limitation of Methods

- Specific drugs and compounds (eg. antacids, kaolin, mineral oil, and barium) may alter the test results.
- Quality and quantity of stool may affect the results.

A Troubleshooting or Back-up Plan

- In case of QNS or contaminated sample, request for a new sample from the patient.

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SIGNATURE OF LABORATORY DIRECTOR
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