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**Lab Dept:** Urine/Stool

**Test Name:** FECAL FAT

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***General Information***

**Lab Order Codes:** FEF

**Synonyms:** Fat, Feces; Stool Fat; Lipids Stool; Fecal Fat, Qualitative; Fecal Fat, Quantitative; Fecal Fat, Random; Fecal Fat, 24 hr or 48 hrs or 72 hrs

**CPT Codes:** 82710 – Fat or lipids, feces; quantitative

**Test Includes:** Fat concentration in g fat/24 hr or % fat reported in a random collection.

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***Logistics***

**Test Indications:** Diagnosing fat malabsorption due to pancreatic insufficiency or intestinal disorders and for monitoring effectiveness of enzyme supplementation in certain malabsorption disorders.

**Lab Testing Sections:** Urine/Stool - Sendouts

**Referred to:** Mayo Medical Laboratories (Test: FATF)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 - 5 days, test set up Monday – Friday

**Special Instructions:** Length of collection period is required on request form for processing. Obtain special collection containers from the lab. Random collections require at least 5 g of stool.

The use of a charcoal marker is not recommended. If charcoal is used, please notify the laboratory.

See [Patient Preparation](#)

**Note:** Other desired stool testing may not be able to be shared with a specimen collected for Fecal Fat testing. Please contact the laboratory for information on multiple tests on stool specimens or see [Patient Preparation](#).

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***Specimen***

**Specimen Type:** Stool, 48 or 72 hour collection preferred (24 hour accepted). **Random stools** can be tested **if at least 5 grams of stool has been collected.**

**Container:** Special containers fecal fat collection containers (Mayo Supply T291).

**Draw Volume:** Entire stool collection (Minimum: 5 g stool)

**Processed Volume:** Specimen will be processed at the reference lab facility. **A minimum of 5 grams of feces is required for testing.**

**Collection:** At the time the container is given to the patient, please:

- Fill in the patient name on the specimen container label.

Review the test to be done and specimen requirements with the patient.

- Collection duration
- Diet requirements
- Collection and storage of the specimen until it is returned to you
- Four MML containers should be provided for a timed collection
- Provide patient with information on how to obtain additional containers should that be necessary.
- Instruct patient to not fill any container more than 3/4 full (to the indicated line on the label).

At the time the patient returns the container, complete the following information on the label:

Duration of collection should have the appropriate box checked. If timed duration is other than those listed, please list it on the line provided.

Indicate if the entire collection is contained in one container or in multiple containers. Indicate total number of containers sent.

**Special Processing:** Label each container with the MML Control Number sticker from the appropriate request form. Send entire collection frozen in containers supplied by MML.

**Note:** Separate containers **MUST BE** submitted when multiple stool tests are ordered.

**Patient Preparation:**

1. For 3 days prior to and during the collection period:
  - Patient should be on a fat-controlled diet (100 - 150 g fat per day)
  - No laxatives (particularly mineral oil and castor oil)
  - No synthetic fat substitutes (eg, Olestra) or fat blocking nutritional supplements
2. Barium interferes with this test procedure; a waiting period of 48 hours before stool collection analysis is recommended.
3. Label all containers, ie, 1 of 2, 2 of 2, etc. and send all containers.
4. A separate order and collection should take place if stool calcium, chloride, magnesium, osmolality, pH, potassium, sodium, zinc, or any microbiology testing is desired.
5. The use of diaper rash ointments will falsely elevate test results. Discontinue use during the collection period.
6. Barium interferes with the test procedure; a waiting period of 48 hrs before stool collection analysis is recommended.

**Sample Rejection:**

Specimens other than feces, mislabeled or unlabeled specimens; specimens submitted that are <5 grams of stool

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**Interpretive**

**Reference Range:**

<b>Timed Collections</b>	
0 – 17 years:	Not established
>or = 18 years:	2 - 7 g fat/24 hours
<b>Random Collections</b>	
All ages:	0 – 19 % fat
Excretion of >7 grams fat/24 hours, when on a diet of 100 g to 150 g of fat, is suggestive of a malabsorption defect.	
Abnormal values should be confirmed by submission of a time collection.	
Test values for timed fecal fat collections will be reported in terms of g/24 hours; the duration of the collection may be 24, 48, 72 or 96 hours. Test values for random fecal fat collections will be reported in terms of % fat.	

**Critical Values:**

N/A

**Limitations:**

Not useful for differentiating among pancreatic diseases. Proper patient preparation is critical. Failure to adhere to a fat-controlled diet or to exclude other oil/oil substitutes from the diet may make interpretation difficult. Barium interferes with this test procedure. A waiting period of 48 hours before stool collection analysis is recommended.

The use of a charcoal marker is not recommended. If charcoal is used, please notify the laboratory.

**Methodology:**

Nuclear magnetic resonance (NMR) spectroscopy

**References:**

[Mayo Medical Laboratories](#) November 2016

**Updates:**

6/29/2004: Specimen method changed from gravimetric to nuclear magnetic resonance.

12/20/2007: Added information regarding collection of random specimens.

8/12/2010: Updated reference ranges for age.

11/15/16: All stool fat qualitative testing forwarded to MML, no longer performed at Children's.