

# Specimen Collection

Laboratory test results are dependent on the quality of the specimen submitted. It is important that all specimens and request slips be properly labeled with 2 patient identifiers, collection date, and origin (source) of the specimen, when applicable.

If there is any doubt or question regarding the type of specimen that should be collected, it is imperative that Mayo Clinic Health System-Franciscan Healthcare Laboratory be called to clarify the order and specimen requirements.

The following are general instructions for specimen collection and transport. Some tests have specific instructions which vary from these general ones. **Always follow the specific instructions for each test.**

## Blood Collection

Most laboratory tests are performed on anticoagulated whole blood, plasma, or serum. In general, specimens should be refrigerated until placed in the courier box for transport to the laboratory. Please see our individual test directory section for specific requirements.

- **Plasma:** Draw a sufficient amount of blood with the indicated anticoagulant to yield the necessary plasma volume. Gently mix blood collection tube by inverting 6 to 10 times immediately after draw. If required separate plasma from cells by centrifugation within 30 to 60 minutes. If drawing in a tube without a separator, transfer the plasma to a 5-mL push-top vial (available from Mayo Clinic Health System-Franciscan Healthcare Laboratory). If drawing in a plasma gel tube (light green top) tube, send entire tube.
- **Serum:** Draw a sufficient amount of blood to yield the necessary serum volume. Allow blood to clot at ambient temperature, and then, separate serum from clot by centrifugation within 30 to 60 minutes. Caution: avoid hemolysis. Centrifuge the serum aliquot so that aliquot is free of all cells. Transfer the serum aliquot to a 5-mL push-top vial (available from Mayo Clinic Health System-Franciscan Healthcare Laboratory). If drawing in a serum gel tube, draw a sufficient amount of blood to yield the necessary serum volume into a serum gel tube. Mix and allow the blood to clot at ambient temperature. Separate serum from clot by centrifugation within 30 to 60 minutes. Make sure that serum is free from cells by centrifuging a second time if cells are seen in the serum after first centrifugation. Send entire tube.

- **Whole Blood:** Draw a sufficient amount of blood with the indicated anticoagulant. Gently mix blood collection tube by inverting 6 to 10 times immediately after draw.

## Specimen Transfer Tubes Available

Serum vials are available from Mayo Clinic Health System-Franciscan Healthcare Laboratory. When more vials are needed, use the “Request for Supplies” form. For each test in this manual, we indicate the amount of serum needed for the test. This volume is calculated by taking the actual serum volume needed for the test, doubling this amount and rounding upward to the nearest 0.5 mL.

**Note:** If specimen is **grossly lipemic**, please send 4 mL of serum.

Use the 5-mL push-top vials (available from Mayo Clinic Health System-Franciscan Healthcare Laboratory) for sending serum specimens. The markings on the vial are in 1 mL increments.

- Centrifuge the specimen and remove the serum. Centrifuge the serum aliquot so that the aliquot is free of all cells.
- Two patient identifiers must be written directly on the vial. The name on the vial **must match exactly** the name on the requisition slip.
- Make sure the cap is pushed in securely. **Do not** wrap tape around the cap.
- Place specimens in a biohazard bag with the requisition slip in the pocket of the bag.

Any test that says “freeze immediately” in the specimen required field, must be frozen solid before being sent with the courier. Specimens that just say “freeze” do not need to be frozen if sent the same day. If the specimen is being sent the next day or after the weekend, it must be frozen.

## Fasting Recommendations for Outpatients (Non-Obstetrical Patients)

A 12-hour fast is recommended for chemistry panels (comprehensive metabolic panel [8511/CMETP] and basic metabolic panel [8505/BMP]), glucoses, and for lipid panels.

## Performing Comparison Studies

Outreach Accounts—Obtain Approval From Terrie Snyder Outreach Coordinator:

- Mayo Clinic Health System-Franciscan Healthcare Laboratory will assay up to 5 specimens at no charge to assist with troubleshooting a facility’s existing method.

- Specimens sent to Mayo Clinic Health System-Franciscan Healthcare Laboratory because the site is developing the assay at their facility will be tested and billed to the facility using the outreach fee schedule. Please provide a completed request form for each patient.

Mayo Clinic Health System-Franciscan Healthcare Affiliates—  
Obtain Approval From Terrie Snyder, Outreach Coordinator:

- Request for comparison specimens should be made through Terri Snyder.

### **Microbiology Specimens**

Information That is Required for Processing Microbiology Culture/Tests:

- Source of the specimen
- Collection date
- Collection time
- Culture/tests must be indicated
- Specimen consistency for stool culture and ova parasites
- Method of urine collection eg, clean void, catheter, voided

Protocol for Shipment of Microbiology Specimens:

- Transport specimens at recommended storage temperature
- Specimen must be preserved in an appropriate transport system
- Specimen must be in a sterile leakproof container with the cap securely closed
- Tape lid of culture plate on both sides to prevent accidental opening
- Place specimens or plates in individual biohazard zipper bags
- Place requisition form in outside pocket
- Multiple specimens for acid fast bacilli cultures and ova parasite must be collected on different days, ie, consecutive days or every other day

### **Tissue Specimens**

Process for the Collection of Tissue Specimens:

- All specimens should be sent in 10% neutral buffered formalin, in an amount adequate to thoroughly cover the specimen. The only exceptions are tissue being sent for frozen examination at Mayo Clinic Health System-Franciscan Healthcare Laboratory and amputated extremities.

- Specimens being sent for frozen examination should be covered with saline.
- Amputated extremities should be double bagged in the red biohazard bags and refrigerated prior to being sent.
- A green tissue examination form must accompany all specimens. The form should be **completely** filled out in order to expedite processing and billing. Please **print** or type all information.
- The specimen container must be labeled with 2 patient identifiers **or specimen will be returned for proper identification**. Additionally, we need the type of specimen, collection date, physician's name, and patient's date of birth on the container.
- Tissue for cytogenetic studies (stillbirths and miscarriages) must be obtained immediately after delivery and placed in transport medium available from the University of Wisconsin Cytogenetics Laboratory. Call 608-262-0402 to obtain this media. Alternatively, media may be obtained from Mayo Medical Laboratories by calling 800-533-1710 and requesting Hank's balanced salt solution (Supply T132). Both laboratories provide instructions on how and where to send tissue. **Do not send tissue to Mayo Clinic Health System-Franciscan Healthcare Laboratory** to obtain specimens for cytogenetic studies. The results will not be accurate if specimen is not placed in media immediately. After submitting a portion of the tissue for cytogenetic studies, place remaining tissue in 10% formalin and forward to Mayo Clinic Health System-Franciscan Healthcare Laboratory with a tissue examination form.