Specimen Collection and Preparation

Waukesha Memorial Hospital (WMH) has provided specimen requirements for each test in this manual. If these instructions are not followed completely, results may be invalidated. Accrediting agencies require that all specimens be labeled with the following information:

- Patient's full name (last name, first name)
- Patient's date of birth
- Date and time of draw
- Initials of person obtaining specimen
- A complete WMH "Laboratory Request Form" including patient's identification number

In addition to the above information, **all Blood Bank specimens that may be used for compatibility tests for transfusion** of blood products must also have the patient's identification number recorded or verified (if using printed label) on the tube from the patient's armband. Legible signature (first initial, last name) of person obtaining the specimen must be **on the tube label**; this name will be recorded in the Blood Bank computer as the person responsible for **positive patient identification**. Patient must wear armband indicating their name and number from the time the specimen is drawn until completion of the transfusion.

Blood gas specimens should have the percent of oxygen the patient was receiving when the blood was drawn and/or any significant conditions which need to be documented on the report (eg, nasal canula, pump, face mask).

All specimen containers must be sealed tightly to prevent spillage. A biohazard bag must be used for transporting specimen(s). A properly completed test request form must accompany all specimens. If a computer generated order is not available, complete the L-34 "Laboratory Request Form" supplied.

Specimens which are sent through the Translogic Tube System must be double bagged and sealed completely in a biohazard bag. Blood gas specimens must be transported immediately on wet ice slush. Capillary specimens should be noted as such.

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 indicated anticoagulant to yield 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 for 10 minutes at 2,000 rpm to 3,000 rpm within 20 to 30 minutes of specimen collection.
  - —Any time plasma is left overnight, please refrigerate specimen.
- *Serum*: Draw a sufficient amount of blood to yield necessary serum volume. Allow blood to clot at ambient temperature; and then, separate serum from clot by centrifugation for 10 minutes at 2,000 rpm to 3,000 rpm within 20 to 30 minutes. Caution: avoid hemolysis.
  - —For specimens requiring serum, blood is drawn in a yellow-top serum gel tube. A plain, red-top VACUTAINER® is also acceptable, but serum must be submitted separated from cells. Reference values of most serum chemistry tests are based on fasting states. If possible, try to obtain a fasting serum specimen from patient. Serum transport tubes are available free of charge.
  - —Specimens for Blood Bank tests that require serum must be in a plain, red-top VACUTAINER(S)® (never serum gel tubes) and must not be separated.
  - —Always try to avoid hemolysis of serum. Hemolysis can increase the levels of lactate dehydrogenase, phosphorus, potassium, total protein, uric acid, etc.
  - —Any time serum is left overnight, please refrigerate the specimen.
- *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 collection.

Specimen Collection Tubes Available

The following is a list of tubes referred to in WMH's specimen requirements:

- *Green-Top (Lithium Heparin) Tube*: This tube contains lithium heparin—used for collection of heparinized plasma or whole blood for special tests.
  Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- *Green-Top (Sodium Heparin) Tube*: This tube contains sodium heparin—used for collection of heparinized plasma or whole blood for special tests (particularly genetic tests).

Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.

- *Grey-Top (Potassium Oxalate/Sodium Fluoride) Tube*: This tube contains potassium oxalate as an anticoagulant and sodium fluoride as a preservative—used to preserve glucose in whole blood and for some special chemistry tests.
  Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- *Lavender-Top (EDTA) Tube*: This tube contains EDTA as an anticoagulant—used for most hematological and Blood Bank procedures.
  Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- *Light Blue-Top (Sodium Citrate) Tube*: This tube contains sodium citrate as an anticoagulant—used for collection of blood for coagulation studies.
  Note: It is imperative that the tube be completely filled. The ratio of blood to anticoagulant is critical for valid results. Immediately after draw, invert tube 6 to 10 times in order to activate anticoagulant.
- *Red-Top Tube*: This tube is a plain tube containing no anticoagulant—used for collection of serum for selected chemistry tests as well as clotted blood for immunohematology.
- *Royal Blue-Top Tube*: There are 3 types of royal blue-top Monoject® tubes—1 with heparin, 1 with EDTA, and the other plain. These are used in collection of whole blood or serum for trace element (metals) analysis. Refer to individual metals in individual test listings to determine tube type necessary.
- *Serum Gel (Yellow-Top) Tube*: This tube contains a clot activator and serum gel separator—used for various laboratory tests.
  Note: Invert tube to activate clotting; let stand for 20 to 30 minutes before centrifuging for 10 minutes. If frozen serum is required, pour off serum into a plastic vial and freeze. Do not freeze tube(s).
- *Special Collection Tubes*: Some tests require specific tubes for proper analysis. Please contact WMH prior to patient draw to obtain correct tubes for metal analysis or other tests as identified in individual test listings.
- *Yellow-Top (ACD) Tube*: This tube contains ACD—used for collection of whole blood for special tests.

Tissue Collection

Usually, tissue is placed in formalin and properly labeled. See "Histology Consultation; Routine Procedures for the Care and Handling of Tissue Specimens" in "Special Instructions" for specific information. If there is a question, please call Histology at 262-928-2111 about whether or not the specimen is to be placed in formalin and how the specimen is to be labeled. A "OR Specimen Collection Form" in "Special Instructions" must accompany all specimens.

Special Consideration

All tissue specimens are to be taken directly to the laboratory. Place specimen in a red, plastic bag with a biohazard label (large specimens) or in formalin bottles in a clear, plastic bag with a biohazard label (small specimens). Please be certain that the specimen container is tightly sealed before placing it in the biohazard bag.

Cervical/Vaginal Thin Prep Collection

Please call Client Services at 262-928-2105 for supplies or for questions about specimen requirements or testing.

Note: A videotape of the proper collection techniques is available upon request by calling the Cytology Department at 262-928-2074.

General Collection Guidelines: Patients should refrain from douching for 24 hours prior to collection. They should also refrain from intercourse, or using contraceptive jellies, ointments, or lubricants 48 hours prior to collection of specimen. Patient should schedule their Pap between day 12 to 20 of the menstrual cycle if possible, avoiding the first 10 days of their cycle.

The presence of menses or heavy bleeding, inflammatory exudate, excessive drying before fixation, or excessive mucus can lead to unsatisfactory or less than optimal specimens. If discharge, mucus, or blood is present, gently wipe material off cervix with a moistened gauze pad. Pap should be collected prior to use of acetic acid or iodine at colposcopy.

ThinPrep® vial must be clearly labeled with patient's legal name and date of birth. A stand is available for holding the vial while collecting specimen.

ThinPrep® specimen may be collected with either the broom-like device which samples both ectocervix and endocervix or a combination of plastic spatula and brush.

- Broom-like device:
  - —Obtain an adequate sampling of cervix using broom. Insert central bristles into endocervical canal deep enough to allow the shorter bristles to fully contact ectocervix. Push gently and rotate broom clockwise 5 times.
  - —As quickly as possible, rinse broom in open PreservCyt® vial by pushing broom into bottom of vial 10 times. Also, swirl vigorously to further release material. Discard collection device. Tightly close and twist cap until torque mark on cap passes torque line on vial. If vial is not closed it could leak into the biohazard bag resulting in insufficient material for cytology and/or HPV testing.
- Endocervical Brush/Spatula:
  - —Obtain an adequate sampling of ectocervix using a plastic spatula. Place narrow end into canal and with round end in contact with ectocervix, exert gentle pressure rotating spatula 360° around ectocervix. Immediately rinse spatula in vial and swirl vigorously 10 times. Discard spatula.
  - —Using an endocervical brush device, insert brush into cervical canal until only bottom most fibers are exposed. Slowly rotate 1/4 to 1/2 turn in 1 direction. Do not over rotate or bleeding will occur. Immediately plunge brush into fixative vial and swish vigorously 10 times while also pushing against vial wall to further dislodge material. Discard brush. Tighten cap so that torque line on cap passes torque line on vial.

Place tightly-capped, labeled vial in a biohazard bag. Completely fill out the Cytology request form and place in the pocket of the biohazard bag. Each specimen should be individually packaged.

Note: It is a regulatory requirement that the following information be included on the patient request form:

- Entire patient name (please do not use nicknames) include any name changes since prior testing
- Physician information (additional copies too)
- Test requested and/or type of screening
- Date specimen obtained
- Specimen source (this is critical information)
- Pertinent clinical information and history
- ICD-9 codes

Regulations also require the laboratory to ask the submitting party for:

- Date of patient's last menses
- Age or date of birth
- Previous history of abnormal report, treatment, or biopsy

Insurance information for billing purposes:

- Please note any special handling instructions by highlighting

In addition, also check HPV testing choice if ordering at time of Pap:

- Reflex HPV testing if ASCUS diagnosis
- HPV regardless of diagnosis
- HPV only (no Pap is collected)