



ROSALIND FRANKLIN UNIVERSITY
OF MEDICINE AND SCIENCE

Clinical Immunology Laboratory

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STORING AND TRANSPORTING SPECIMENS

For optimum results, follow the specific instructions for storage and shipment of specimens for each individual test. In most cases, **BLOOD IS TO BE SHIPPED AT ROOM TEMPERATURE.** Blood delivered from the Rosalind Franklin University Clinics should be transported in a biohazard plastic bag to the laboratory.

Blood samples that are delivered by courier, Federal Express, UPS, DHL or U.S. Postal Service should be packaged in biohazard containers that are made for travel and shipped according to federal packaging requirements, to comply with Federal Postal Regulations. After collection, wrap the sample with an absorbent material and place into and at the bottom of a specimen bag. Remove most of the air from the bag before zipping it closed. Put the sample into a styrofoam mailer, then insert into a cardboard sleeve or box. Tape the ends before mailing.

SPECIMEN SUBMISSION, COLLECTION AND HANDLING

Test Requisitions

All specimens, examined in this laboratory, must be submitted to the Clinical Immunology Laboratory by an authorized physician or his clinical staff with either the laboratory requisition or a requisition form from the authorized physician with proper identification. Oral requests for lab tests from the physician or his clinical staff must be followed with a written request within 48 hours.

All requisition forms will be kept on file in the laboratory for 2 years.

Collection of Specimens

Most specimens submitted for analysis may be collected in the required collection tubes by routine venipuncture.

Serum

After venipuncture, invert the tubes gently no more than five times. For most test analyses requiring serum, tubes with serum separators may be used. Check specimen requirements for the test. Maintain at room temperature unless otherwise noted in the specimen requirements.

NOTE: Blood tubes with serum separators should not be submitted for ABO or Rh blood typing.

Whole Blood

Collect whole blood according to instructions for each individual test. Gently invert to mix thoroughly. Maintain at room temperature before transport to the laboratory. **Never** freeze or refrigerate whole blood.

Common Causes of Unacceptable Specimens or Inaccurate Test Results:

Hemolysis

Lysis of red blood cells during collection or handling of blood specimens may cause hemoglobin or other components to escape from the cells into the serum or plasma. The color may range from faint pink to deep dark red rather than the normal straw color. Grossly or moderately hemolyzed specimens may be rejected.

Hyperbilirubinemia

Icteric serum or plasma varies in color from dark to bright yellow, rather than normal straw color. Icterus may affect some determinations and such specimens may be rejected.

Turbidity (Lipemia)

Turbid, cloudy or milky serum (lipemia serum) may be due to the presence of lipids in the blood. Bacterial contamination may alter certain test results and will be rejected.

Specimen Collection and Handling

1. Each specimen must have a laboratory requisition for all tests ordered. On this requisition enter:
 - a. Patient's name
 - b. Laboratory/referring number- if applicable
 - c. Date and time specimen drawn
 - d. Referring physician
 - e. Referring clinic
 - f. Diagnosis
2. Each blood tube must have a label with the patient's name, date and time drawn written on it. Use ball-point pen; DO NOT use a felt tip pen.

In the event that a patient specimen is rejected, the referring clinic will be notified with the reason for rejection. See criteria for specimen rejection.

CRITERIA FOR SPECIMEN REJECTION

The following are criteria with which specimens will be rejected by the Clinical Immunology Laboratory:

1. Any blood or specimen not labeled properly. Proper labeling required by law consists of patient's first and last name, date and time drawn, physician and referring clinic.
2. Green top (heparin tubes) older than 48 hours for leukocyte antibody detection, natural killer cells or $T_H1:T_H2$ cytokine ratio may be rejected. Lymphocytes will be isolated from specimens older than 48 hours and the viability will be determined. If the viability is greater than 80%, the assay will be performed. If the viability is less than 80%, the specimen will be rejected.
3. Green top tubes received on ice. All green top tubes must be transported and stored at room temperature.
4. Grossly hemolyzed serum (red top tubes).
5. Blue top tubes not transported or stored on ice. Shipped citrated plasma (blue top tubes) will be rejected if not shipped frozen on dry ice.
6. Improper tubes sent for tests ordered.

If the inappropriate specimen is submitted it will be stored in the laboratory until the clinic submitting the specimen is contacted. In addition, a written report will be sent to the clinic.