

## Appendix J

# Immunology

## Specimen Collection & Processing

### Serum Specimens

Specimen must not be grossly hemolyzed, lipemic or bacterially contaminated or it will be rejected. Specimens should be frozen if not received in the lab within 24 hours unless specifically addressed below.

### Plasma Specimens

Specimen must not be grossly hemolyzed, lipemic or bacterially contaminated or it will be rejected. Specimens should be frozen if not received in the lab within 24 hours unless specifically addressed below.

Check the test listing to determine if EDTA or Sodium Heparin anticoagulant should be used. Lithium heparin anticoagulant should NOT be used for Immunology testing. Therefore, the green top collection tube should be carefully checked and identified as sodium heparin (Na Heparin).

### Cerebrospinal Fluid

Spinal fluid must not be visibly contaminated or grossly bloody.

### Procedures needing acute & convalescent sera

Two serum specimens must be sent together. The first should be drawn during the onset of the illness (the acute phase). This specimen should be clearly marked "acute" and the date drawn listed on the specimen container. The second specimen should be drawn 10 to 14 days later during the patient's convalescent stage. This specimen should be clearly marked "convalescent" and the date drawn on the specimen container. These paired sera will then be tested simultaneously.

### Immunology procedures requiring special handling

#### COLD AGGLUTINATION:

10 ml red top (plain). Maintain temperature of the tube at 37° C until delivered to the Immunology laboratory (use heel warmer).

If this is not possible, place the tube in a 37° C water bath or incubator, immediately after the specimen is drawn. Allow to clot for 15 minutes. Spin specimen for 5 minutes; remove serum and place in a separate plastic tube. Transport **both** the separated serum and remaining clot to the Immunology laboratory. Transport serum and cells at room temperature. **DO NOT FREEZE!**

#### COMPLEMENT – TOTAL HEMOLYTIC (CH50)

One red top tube of whole blood. Serum **MUST** be separated from the red cells **and frozen** within 2 hours of collection. Place serum into two plastic tubes. Freeze immediately at -10° C or colder. Ship frozen on dry ice.

#### CRYOGLOBULINS

Two 10.0 ml red top (plain) tubes. Maintain temperature at 37° C until delivered to the Immunology laboratory. If this is not possible, place the tube in a 37° C water bath or incubator immediately after the specimen is drawn. Allow to clot for 15 minutes. Spin specimen for 5 minutes; remove serum and place in a separate tube. Transport the separated serum at room temperature. **DO NOT FREEZE!**

#### CRYPTOCOCCAL ANTIGEN

1.0 ml serum or spinal fluid (NO plasma); specimens must be free of white blood cells, platelets, fibrin, mucus or contaminants.

## Appendix J: Immunology continued

### FLOW CYTOMETRY ANALYSIS

(Specimen requirements for ALL flow cytometry analysis: Immune profiles, leukemia or lymphoma panels).

#### Peripheral Blood

Specimen drawn in sodium heparin (green top) preferred; ACD Solution A (yellow top) or EDTA (purple top) also acceptable. **NO lithium heparin.**

Specimen should be held at room temperature and transported to the Immunology laboratory as quickly as possible. **DO NOT SPIN!**

Minimum requirements: Child – 3.0 ml  
Adult – 10.0 ml

#### Bone Marrow

Specimens should be drawn into a sterile preservative-free liquid sodium heparin tube (available from the Immunology Laboratory). Specimen should be held at room temperature and transported to the Immunology Laboratory as soon as possible. The cap must be securely fastened. Identify site of bone marrow on requisition and/or tube.

#### Lymph Node or other Tissue

Specimen should be stored in holding media (RPMI-1640/gentamicin/fetal calf serum) available from the Immunology Laboratory. Specimen should be held at room temperature and transported to the Immunology Laboratory as soon as possible. Refrigerated if tissue is held for > 24 hrs. **Saline should not be used as a collection or transport media.**

### Rejection Criteria for Flow Cytometry

#### ALL (Peripheral Blood, Bone Marrow, or Tissue)

1. Specimen must be in the recommended anticoagulant, and properly filled. Partial draws should be noted on the request form.
2. Specimen should be less than 48 hours old.
3. Specimen should be free from hemolysis.
4. Specimen should not be clotted.
5. Specimen should be held and transported at room temperature ONLY. Frozen specimens will not be accepted.

#### Bone Marrow

1. Specimen must be collected in the correct media (sodium heparin) and transported at room temperature.
2. Specimen must be less than 48 hours old.
3. Specimen tube cap must be securely fastened. Specimens that leak or spill into the transport bag will not be accepted.

#### Tissue

1. Specimen must be collected in the correct holding media and transported at room temperature.
2. Specimen must be less than 48 hours old.

### HEPATITIS ANTIBODY TESTING

Serum or Plasma may be used, but specimen should not contain sodium azide.

\* Hepatitis B antibody is serum only.

## Scott & White Flow Cytometry Information Sheet

All specimens must be labeled with Date and Time of Collection and collector's initials

### Leukemia/Lymphoma Panels

#### Peripheral Blood

1. Acceptable Anticoagulants in order of preference
  - a. Sodium Heparin - viable for 48 hours
  - b. ACDA - viable for 48 hours
  - c. EDTA - must be received within 24 hours of draw time
2. Specimens cannot be hemolyzed, clotted or drawn in Lithium Heparin
3. Specimens must be kept at room temperature (20-24° C) and not spun.
4. Minimum volume requirements
  - a. Adults - 10 mL
  - b. Children - 3 mL

#### Body Fluids (pleural, pericardial, peritoneal or CSF)

1. If anticoagulants are used, Sodium Heparin is preferred. ACDA or EDTA is also acceptable.
2. Specimen cannot be clotted and must be less than 24 hours old.
3. Specimen must be kept at room temperature (20 - 24° C).
4. Call Flow lab for specimen volume requirements.

#### Bone Marrow

1. Collect Heparin tubes provided by the Flow lab. The specimen is viable for 48 hours
  - a. If no Immunology tubes are available, it is acceptable to collect the bone marrow in Sodium Heparin (48 hrs), ACDA (48 hrs) or EDTA (24 hrs) tubes. The specimen must be labeled as BONE MARROW
2. Specimens must be kept at room temperature (20 - 24° C) and transported to the Flow Lab as quickly as possible.

#### Lymph Nodes or other Tissues (including FNA)

1. Specimen should be stored in RPMI holding media provided by Flow Lab
2. Specimen must be kept at room temperature (20 - 24° C) and transported to the Flow lab as quickly as possible.
3. Specimens should be less than 48 hours old.