

Non-Technical SOP

<b>Title</b>	<b>Reference Workup for Antibody Identification</b>	
<b>Prepared by</b>	Stephanie Codina	Date: 5/2/2011
<b>Owner</b>	Stephanie Codina	Date: 5/2/2011

<b>Laboratory Approval</b>		
<b>Print Name and Title</b>	<b>Signature</b>	<b>Date</b>
<i>Refer to the electronic signature page for approval and approval dates.</i>		
<b>Local Issue Date:</b>		<b>Local Effective Date:</b>

<b>12 month (or new) management review and approval: Signature acknowledges SOP version remains in effect with NO revisions.</b>		
<b>Print Name</b>	<b>Signature</b>	<b>Date</b>

Form revised 3/31/00

**TABLE OF CONTENTS**

1. PURPOSE..... 2  
 2. SCOPE..... 2  
 3. RESPONSIBILITY..... 2  
 4. DEFINITIONS..... 2  
 5. PROCEDURE..... 2  
 6. RELATED DOCUMENTS ..... 7  
 7. REFERENCES ..... 7  
 8. REVISION HISTORY..... 7  
 9. ADDENDA AND APPENDICES..... 7

**1. PURPOSE**

In certain situations specimens are referred to the reference laboratory for antibody identification, ABO discrepancy resolution, or other workup. This procedure outlines the steps that will be followed to refer, bill, and result a reference specimen.

**2. SCOPE**

This procedure applies to any complex specimen that will be referred to the reference laboratory for testing.

**3. RESPONSIBILITY**

All blood bank staff members must understand the process for referring specimens to the reference laboratory.

**4. DEFINITIONS**

N/A

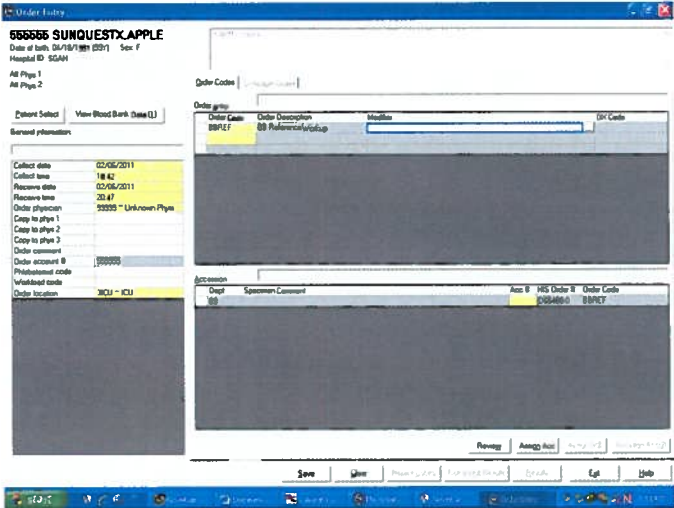
**5. PROCEDURE**

**Sending Specimens TO the Reference Lab**

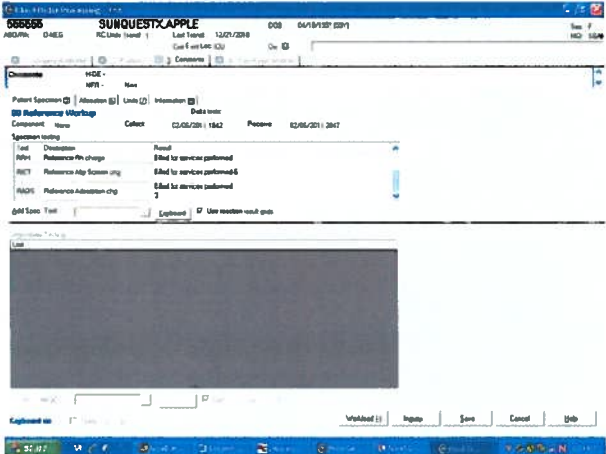
Step	Action
1	Specimens are referred to the reference laboratory for testing in various situations. The decision to refer a specimen is based on the complexity of the workup, availability of reagents, departmental workload, and staffing. Specimens containing suspected warm auto, strong cold auto, and multiple antibodies are routinely referred. The techs working the bench have the authority to determine if a specimen should be referred to a reference lab for testing.

Step	Action
2	<p>Notify the patient's nurse or physician when a decision has been made to refer the specimen to a reference lab for testing. Ascertain the patient's current transfusion needs, clinical status, transfusion history, and a list of current medications. Notify a pathologist if the current transfusion need is urgent. Document pathologist notification in the shift-to-shift communication log.</p>
3	<p>Instruct a phlebotomist or nurse to collect additional specimen from the patient for reference referral.</p> <ul style="list-style-type: none"> <li>A. ARC requests two 7mL clot tubes and two 7mL EDTA tubes for each workup. At a minimum, send one 10mL EDTA tube.</li> <li>B. Specimens must be labeled with the patient's full name, medical record number, date and time of collection, collector's identification, and the current blood bank armband number.</li> </ul>
4	<p>Complete an "Immunohematology Consultation Request" form. See appendix A for reference.</p> <ul style="list-style-type: none"> <li>A. Complete the lines in Box 2 by filling in the hospital information.           <ul style="list-style-type: none"> <li>a. ARC Customer Number               <ul style="list-style-type: none"> <li>i. SGAH = B1SHAD</li> <li>ii. WAH = B1WADV</li> </ul> </li> <li>b. Address, phone number, and fax number of the blood bank.</li> <li>c. Name of the person referring the specimen.</li> <li>d. Date of the request.</li> <li>e. Treating physician.</li> </ul> </li> <li>B. Complete Box 3 by filling in the patient information.           <ul style="list-style-type: none"> <li>a. Patient's name, medical record number, birthdate, race, and gender.</li> <li>b. Date of specimen collection and patient's ABO/Rh.</li> <li>c. Patient's diagnosis, H&amp;H, and current medications.</li> <li>d. Patient's transfusion and pregnancy histories and any known antibodies.</li> </ul> </li> <li>C. Complete Box 4 by filling in the testing information.           <ul style="list-style-type: none"> <li>a. Priority of request.</li> <li>b. Investigation requested.</li> <li>c. Blood product needs.</li> </ul> </li> <li>D. Complete Box 5 with the testing results obtained in our laboratory.</li> </ul>
5	<p>If the patient requires blood transfusion urgently or within the same day, complete an "Urgency Assessment Tool."</p> <ul style="list-style-type: none"> <li>A. Patient's hemoglobin and date/time collected</li> <li>B. Date/time of blood transfusion</li> <li>C. Reason for expedited handling</li> <li>D. Patient name and diagnosis</li> <li>E. Referring hospital name and telephone number</li> <li>F. Name and telephone number of referring physician</li> </ul>

Form revised 5/31/00

Step	Action
6	Call ARC using the phone number printed on the form. Instruct them that you are sending a specimen for workup. Document the name of the person called and date/time of call in Box 1 on the form.
7	Make a copy of the completed form and any screen/panel antigrams.
8	<p>Order a reference test in the LIS.</p> <ol style="list-style-type: none"> <li>A. Access Sunquest function “Order Entry.”</li> <li>B. In the “Lookup By” prompt, select “Patient ID” from the dropdown menu.</li> <li>C. At the “Value” prompt, type in the patient’s medical record number.</li> <li>D. At the “Collect Date” and “Collect Time” prompt, type the date and time the specimen was collected from the actual specimen tube.</li> <li>E. Tab through the “Receive Date” and “Receive Time” prompts to default the current date and time.</li> <li>F. At the “Order Physician” prompt, type in the number of the physician who ordered the workup. Click on the ellipses to search by physician name.</li> <li>G. Tab until your cursor reaches the “Order Code” box. Type “BBREF” in the box and press the “Tab” key.</li> <li>H. Click the “Save” button.</li> <li>I. Apply a copy of the label to the Antibody Identification form.</li> </ol> 
9	<p>Wrap the specimens in absorbent sheets and place them inside a biohazard ziplock bag. Place the following items inside a specimen transport box or canister and secure the box or canister closed. Use packaging tape if needed.</p> <ol style="list-style-type: none"> <li>A. The original copy of the “Immuno-hematology Consult Request” form.</li> <li>B. Copies of the screen or panel antigrams.</li> <li>C. The biohazard bag containing the patient specimen(s).</li> </ol> <p>Do not send the original T&amp;S specimen to ARC with the workup samples.</p>



Step	Action
3	Enter the antibody identification into the T&S specimen results per procedure, "Antibody Identification."
4	<p>The reference lab will fax a preliminary billing sheet along with the patient results. The preliminary billing should be entered along with the results.</p> <ol style="list-style-type: none"> <li>A. While in the Blood Order Processing BBREF data entry screen, type a semicolon (;) then the mnemonic for the reference test in the "Add Spec Test" field and press the tab key. See appendix C for a list of reference test mnemonics.</li> <li>B. The test that was selected will appear. Highlight the result field and press the "Tab" button. A new line will open.</li> <li>C. In the new line, type one semicolon (;) then the number of the particular test to bill. DO NOT press the semicolon twice (;;) as it will change the field to a freetext field and will not bill the appropriate number of tests.</li> <li>D. Continue steps B and C until all tests have been billed.</li> <li>E. Click the "Save" button.</li> </ol> <p>Note: If a test is added in error you can fix it by:</p> <ul style="list-style-type: none"> <li>• If the test was added before saving, highlight the test and press the "Shift" and "Delete" keys together. This will remove the test.</li> <li>• If the test was added after saving, you must add a credit test. Follow the instructions above using the credit test mnemonic from Appendix C.</li> </ul> 

Step	Action
5	Document the following information on the billing form. A. Medical record number of patient B. Accession number of the patient specimen to which it was billed C. Date billed D. Tech initials.  <div style="text-align: right;">             Billed to Patient              MRN:              Access#:              Date:              Tech:           </div>
6	Place the form in the appropriate bin for billing reconciliation.

6. **RELATED DOCUMENTS**  
 SOP: Antibody Identification

7. **REFERENCES**  
 None

8. **REVISION HISTORY**

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes SWB.016.000		
000	8.2.12	Section 5: Added new computer entry mnemonic for no new antibodies detected	SCodina	NCacciabeve

9. **ADDENDA AND APPENDICES**  
 Appendix A: Immunoematology Consultation Request  
 Appendix B: ARCBS After-Hours Patient Urgency Assessment Tool  
 Appendix C: Reference Lab Billing Mnemonics

Appendix A

Immunochemistry Consultation Request

American Red Cross  
Biomedical Services  
Washington, DC 20006

Immunochemistry  
Consultation Request

Greater Chesapeake & Potomac  
Baltimore, MD 21215  
CLIA # 21D0649813

Reference Lab contact numbers: Phone: 410-764-4860 (800-728-5411) Fax: 410-764-4912 (800-764-4909)

See page 2 for instructions, sample types and tube labeling requirements

1 Call Reference Laboratory before sending sample

Reference Lab person contacted: \_\_\_\_\_ Date/Time contacted: \_\_\_\_\_

2 Submitting Facility Information

Facility Name/ID: \_\_\_\_\_ Request Date: \_\_\_\_\_  
Facility Address: \_\_\_\_\_ City/State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Blood Bank Contact: \_\_\_\_\_  
Blood Bank Phone #: \_\_\_\_\_ Requesting Physician: \_\_\_\_\_  
Blood Bank Fax #: \_\_\_\_\_

3 Patient Information

Patient Name: \_\_\_\_\_ Patient ID: \_\_\_\_\_  
Birth Date/Age: \_\_\_\_\_ Race: \_\_\_\_\_ Gender: M  F   
Specimen Date: \_\_\_\_\_ ABO/Rh: \_\_\_\_\_  
Diagnosis: \_\_\_\_\_ Hgb/Hct: \_\_\_\_\_  
Medications: \_\_\_\_\_  
Additional Information: \_\_\_\_\_

Transfusion History: No record

Within last 3 months: No  Yes  ▶ Dates / products: \_\_\_\_\_

Prior to last 3 months: No  Yes  ▶ Dates / products: \_\_\_\_\_

Pregnancy History: Number: \_\_\_\_\_ Currently pregnant? No  Yes  ▶ Due date: \_\_\_\_\_

Known RBC antibody(ies) Anti-D  -C  -c  -E  -e  -K  -Fy<sup>a</sup>  -Fy<sup>b</sup>  -Jk<sup>a</sup>  -Jk<sup>b</sup>  -S  -s

Other (list): \_\_\_\_\_

4 Test Request Routine  (1-2 business days)

Previously tested by ARC

\* Priority  (same business day)

\* Critical  (one work shift)

\* Must submit Urgency Assessment Tool

Investigation Requested: (Check all that apply)

ABO/Rh typing  Incompatible crossmatch  RBC phenotype   
Positive DAT  Suspected transfusion reaction  Titer   
Antibody identification  HDFN  Eluate  OTHER SPECIFY: \_\_\_\_\_

Products Requested for this patient: (Check all that apply)

# units requested: \_\_\_\_\_  
Date/time needed: \_\_\_\_\_  
OTHER SPECIFY: \_\_\_\_\_  
Product Attributes: (Check all that apply)  
CMV-negative   
Leukoreduced   
Irradiated   
Hemoglobin S-negative RBC   
OTHER SPECIFY: \_\_\_\_\_

5 Summary of Antibody Testing Results: Please provide copies of blood bank test results.

Tube: LISS  PEG  ENZ  IS 37C AHG

Other:  \_\_\_\_\_ I \_\_\_\_\_  
II \_\_\_\_\_  
III \_\_\_\_\_

Gel

DAT: \_\_\_\_\_

Solid Phase

AHG Used: Polyspecific  IgG

ELUATE: \_\_\_\_\_

American Red Cross Biomedical Services  
Form: Immunochemistry Consultation Request

September 2006

Page 1 of 2  
16.4.fm007 W2053 v-1.1



**Appendix B**

**ARCBS After-Hours Patient Urgency Assessment Tool**

<b>American Red Cross Biomedical Services (ARCBS) After-Hours Patient Urgency Assessment Tool</b>	
<p><b>FOR AFTER-HOURS: CALL-IN EMERGENT WORK-UP BY CONTACTING: 410-764-4650 or 1-800-728-5411. If there is no answer, call 410-764-4640 and the after-hours technologist will be paged.</b> If transfusion is required in less than 15 hours, contact your facility MD. The Blood Bank MD <i>or the referring patient's physician</i> needs to contact the ARC physician on-call to discuss the case. Call 410-764-4640 and the ARC Physician on call will be paged.</p>	
<p><b>Obtain the following information to assist with after-hours communications:</b></p> <p>Patient's current hemoglobin value (include date/time): _____            Date/time blood transfusion ordered: _____            Reason for expedited handling: _____</p>	
Patient Name:	Patient Diagnosis:
Referring Hospital:	Referring Hospital Blood Bank Telephone Number:
Name of Referring Physician to Contact:	Telephone Number of Referring Physician to Contact:
<p><b>Approved Scenarios:</b></p> <ol style="list-style-type: none"> <li>1. Active bleeding</li> <li>2. Emergency surgery</li> <li>3. Symptomatic anemia</li> <li>4. Emergency red cell exchange</li> <li>5. Recent medical history that could be adversely impacted by development or worsening of anemia</li> <li>6. Organ transplant with red cell antibodies</li> <li>7. Suspected hemolytic transfusion reaction where ARC did test of record crossmatch</li> </ol>	<p><b>Assessing Urgency</b></p> <p><i>The following questions are designed to help identify referrals for immunohematologic resolution that should be elevated to an emergency status.</i></p> <ol style="list-style-type: none"> <li>1. <b>Patient's clinical symptoms or other relevant symptoms?</b> <ol style="list-style-type: none"> <li>a. Compromised cardiopulmonary reserve (presence of cardiac and/or pulmonary disease)? <b>Yes / No</b></li> <li>b. Increased rate/magnitude of blood loss (actual) anticipated? <b>Yes / No</b></li> <li>c. Atherosclerotic Disease (cardiovascular, cerebrovascular, peripheral vascular disease)? <b>Yes / No</b></li> <li>d. Altered O<sub>2</sub> consumption (affected by pharmacologic agents, sepsis, or other factors)? <b>Yes / No</b></li> </ol> </li> <li>2. <b>is the patient actively bleeding? Yes / No</b>            Note: A rapid drop in hemoglobin (&gt; 1 gm / 24 hours) may place the patient at risk.</li> <li>3. <b>Does the patient require emergency surgery during the next 24 hours? Yes / No</b></li> </ol> <p><b>Emergency status should be considered for those patients who:</b></p> <ul style="list-style-type: none"> <li>• Suffer any of the symptoms listed in #1.</li> <li>• Or have a "Yes" answer to either question 2 or 3.</li> </ul>
<p><b>Disapproved Scenarios:</b></p> <ol style="list-style-type: none"> <li>1. Outpatient transfusion (patient otherwise stable)</li> <li>2. Elective surgery (antibody ID or requests for antigen negative blood)</li> <li>3. Transfusion not emergent and patient's condition unlikely to change for several hours</li> <li>4. Requests for workup when transfusing antigen negative units prophylactically</li> <li>5. Known AIHA and workup performed within last seven days</li> <li>6. Patient with known antibodies requiring rare blood when units not stored on site</li> <li>7. Typing donor units for low incidence antigens</li> </ol>	
Name of ARC Physician On-Call:	
ARC Physician On-Call Follow-Up Contact Regarding Transfusion Date/Time and Outcome:	

Form revised 3/31/00

**Appendix C**

**Reference Lab Billing Mnemonics**

CPT Code	CPT Description	Charge Code	Charge Description	Credit Code	Credit Description
85660	Hgb S, per test, patient sample	RHGBS	Reference Hgb S charge	CRHGBS	Reference Hgb S Credit
86156	Cold Agglutinin screen, per screen	RCAS	Reference cold agglutinin screen	CRCAS	Ref cold agglutinin scn credit
86157	Cold Agglutinin titer, per titration	CAT	Reference cold agglutinin titer	RCAT	Ref cold agglutinin titer credit
86850	Antibody Screen, each media	RICT	Reference Aby Screen Chg	CRICT	Refer Aby Screeen Credit
86860	Elution, each	RELU	Reference Elution Charge	CRELU	Reference Elution Credit
86870	AB ID/each panel and media	RABI	Reference Panel Charge	CRABI	Reference Panel Credit
86880	DAT, each antisera	RDAT	Reference DAT Charge	CRDAT	Reference DAT Credit
86885	AbID/each selected reagent cell	RAB1	Reference AbID each cell	CRAB1	Reference Abld each cell Credit
86886	Indirect titer, per antibody	RIDT	Reference indirect titer per ab	CRIDT	Ref indirect titer per ab Credit
86900	ABO Type	RABO	Reference ABO Charge	CRABO	Reference Laboratory Credit
86901	Rh Type	RRH	Reference Rh charge	CRRH	Reference Rh Credit
86904	Ag screen with patient serum, per unit	ANPTCH	An Scr Pt's serum chg	ANPTCR	An Scr Pt's serum cr
86905	RBC Ag, other than ABO or D, each (patient)	RPHEN	Reference Phenotype charge	CRPHEN	Ref Phenotype Credit
86906	Rh phenotyping complete	RRHPH	Reference Rh Phenotype charge	CRRHPH	Ref Rh Phenotype Credit
86940	Hemolysins and agglutinins auto, each	RHAA	Reference Hem and Agg Auto Each	CRHAA	Ref Hem and Agg Auto Credit
86941	Hemolysins and agglutinins incubated	RHAI	Ref hemolysins and agglutinins	CRHAI	Ref hemolysins and agglut Credit
86970	Pre-Rx RBCs w/chemicals/drugs/per cell	RPRBC	Ref Pretreatemtn RBC chg	CRPRBC	Ref Pretreatment Credit
86971	Pretreatment with enzymes, per cell	REZT1	Reference pretreat with enz/cell	CREZT1	Ref pretreat with enz/cell Credit
86972	Separation by density gradient, retics	RSEP	Ref separation by density grad	CRSEP	Ref sep by density grad Credit
86975	Incubation: serum and drugs, each	RSDI	Ref serum/drug incubation/cell	CRSDI	Ref serum/drug inc/cell Credit
86976	Dilution of serum, per aliquot	RSDIL	Ref dilution of serum per alq	CRSDIL	Ref dil of serum /alq Credit
86977	Incubation with inhibitors, per aliquot	RINH	Reference Inhibition Chg	CRINH	Ref Inhibition Credit
86978	Differential/Auto Ads, each ads	RADS	Reference Adsorption chg	CRADS	Ref Adsorption Credit
86999	Miscellaneous Adsorptions, per ads	RMAD	Ref misc adsorptions	CRMAD	Ref misc adsorptions Credit
86999	Thawing rare reagent red cells, per cell	RTHRC	Reference thaw rare rbc	CRTHRC	Ref thaw rar rbc Credit
86999	Hypotonic wash RBC separation	RHW	Ref hypotonic wash rc sep	CRHW	Ref hypotonic wash rc sep Credit
86999	IgA testing	RIGA	Reference IgA testing	CRIGA	Reference IgA testing Credit
86999	Monocyte monolayer assay	RMMA	Ref monocyte mono layer	CRMMA	Ref monocyte mono layer Credit
86999	Historic antigen negative, per antigen	RUNAG	Ref unconfirmed ag neg	CRUNAG	Ref unconfirmed ag neg Credit
86999	RBC antigen nega ARDP high rare/unit	RHIN	Reference high incidence neg rc	CRHIN	Ref high incidence neg rc Credit
86999	Red cell antigen neg, pheno/unit (r', r", e)	RPHRH	Reference rc ag neg It e	CRPHRH	Ref rc ag neg It e Credit
66125	Import fee-red cell	RIMF	Ref import fee rare	CRIMF	Ref import fee rare Credit
66126	Unit search fee for red cells	RUSF	Ref unit search fee	CRUSF	Ref unit search fee Credit
66127	Special recruitment for products	RRFP	Reference special recruit for rbc	CRRFP	Ref special recruit for rbc Credit
86999	Platelet crossmatch	PLAXM	Platelet Xmatch charge	CPLAXM	Platelet Xmatch Credit
86999	Special antiglobulin test	RSAT	Ref special antibody test	CRSAT	Ref special antibody test Credit

Form revised 12/1/00