Status Scheduled PolicyStat ID 12417624

Beaumont

Origination	6/22/2022
Last Approved	10/18/2022
Effective	11/17/2022
Last Revised	10/18/2022
Next Review	10/17/2024

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Area	Laboratory-Blood Bank
Applicability	All Beaumont Hospitals

Submitting Samples to External Reference Laboratories - Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This document will provide Blood Bank staff with guidance for the submission of samples to an external reference laboratory.

II. INTRODUCTION:

A. In some circumstances it may be necessary to enlist a reference laboratory to perform red blood cell (RBC) molecular genotyping and extensive testing on patients or to provide assistance with locating compatible units for patients with known antibody specificities or antigen. These laboratories are staffed with highly trained technologists in the field of serologic investigation and have access to a variety of rare test RBCs and units, as well as an international network of blood suppliers and reference labs.

B. The Blood Bank primarily utilizes the Versiti Michigan and Versiti Wisconsin Immunohematology Reference Laboratories (IRL) for testing. Alternatively, the American Red Cross (ARC) Immunohematology Reference Lab or the University of Michigan Hospitals and Health System may also be called upon to complete a patient workup when appropriate.

III. SCOPE:

A. The services of the Versiti IRLs or an alternative reference laboratory may be used when a technologist, after consultation with management or a medical director, determines that a difficult antibody or transfusion-related problem requires this additional service.

B. The reference laboratory may also be used to help find compatible units for patients with

known antibody specificities in situations where it may be difficult to find blood in the Blood Bank inventory; a sample may or may not be required to be sent in this situation.

C. Versiti Wisconsin will be used to perform molecular genotyping, Rh variant testing, and partial Rh(D) analysis.

IV. SPECIMEN COLLECTION AND HANDLING:

One red clot tube (6mL) and two purple or pink EDTA whole blood (10mL total) pre-transfusion specimens are usually acceptable for most reference lab testing. Serum separator tubes are not acceptable. The reference laboratory may have other sample requirements; call the reference laboratory before collecting or sending patient samples for additional specimen requirements. All specimens must be properly labeled with patient last name, first name, site medical record number, date collected, time collected, and signature or tech code of person obtaining specimen.

V. FORMS

A. Versiti Michigan, Immunohematology Reference Lab Request

B. Versiti Wisconsin, Immunohematology Reference Lab Request

C. American Red Cross, Immunohematology Consultation Request

D. University of Michigan Hospitals and Health System, Request for Immunohematologic Studies

VI. SUPPLIES

A. Copy of all Blood Bank testing pertinent to the case

B. Shipping container

C. Plastic biohazard bag

D. Absorbent material

VII. POLICIES:

A. Testing will be performed routine by the reference lab if the patient's hemoglobin is > 7.0 g/dL and there is no impending procedure for the patient.

B. STAT and after hours testing will be performed only when patient's hemoglobin is <7.0 g/dL.

C. Testing outside of routine hours requires confirmation of patient's clinical need for emergency transfusion via laboratory values and/or physician assessment.

VIII. PROCEDURE:

A. Confirming Sample Requirements

1. Call the reference laboratory to inform the reference laboratory of the degree of urgency, and ask if there are any special sample requirements.
    a. If a sample is being sent to Versiti Wisconsin for molecular genotyping, no phone

call to the reference laboratory is necessary.

2. Determine if there is sufficient sample available to meet the requirements.
    a. If there is sufficient sample available, proceed to the procedure *Submission of Sample to Reference Lab*.
    Note: It is acceptable to retrieve and send a complete blood count sample (lavender top) on the patient. In addition, the Blood Bank's type and screen sample may be sent if the sample is no longer in-date, and the patient has not been transfused within the 7 day post collection.
    b. If additional sample is required, order a miscellaneous Blood Bank test (LAB6339) in Epic and notify the phlebotomy area to request a stat blood draw, or notify the caregiver if phlebotomy does not collect the patient. Note: This miscellaneous Blood Bank test will remain pending until the samples have been collected and sent to the reference laboratory, at which time the miscellaneous Blood Bank test may be canceled.

B. Submission of Sample to Reference Lab

1. Complete the *Request Form* for the reference laboratory as completely as possible with:
    a. Diagnosis
    b. Transfusion History
    c. Pregnancy History
    d. Recent Hemoglobin
    e. Medication History
2. Attach a copy all pertinent laboratory testing results for the patient, and all applicable antigrams.
3. Make a copy of the *Request Form* for our records.
4. Package the patient sample(s) in a manner to contain leakage. Wrap test tubes in parafilm or absorbent material, place test tubes in a biohazard bag. Place sealed bag in padded envelope or Styrofoam box.
5. Arrange for transport to the reference laboratory.
    a. Call the Livonia Center at 1-734-855-4660 to arrange for a specimen transport to the Versiti IRLs.
    b. Call Client Services at 1-248-577-9600 to arrange a cab for delivery to the American Red Cross IRL or The University of Michigan Hospitals and Health System if sending samples to these reference laboratories.
6. Document the submission of the sample to the reference laboratory.
    a. Enter a **CMTXT** message code in the Blood Bank computer system with date and type of testing submitted. For example, samples submitted for antibody identification, molecular genotyping, platelet studies, adsorption studies, etc.
    b. Royal Oak/Troy Only: Document the *Log of Samples Submitted to a Reference*

Laboratory.

7. Place all paperwork in the *Sent to Reference Lab / Waiting for Preliminary Reference Lab Report* file or in the designated area/ communication bench.
8. When the reference laboratory calls or faxes the preliminary report, retrieve the lab copies of the *Request Form* and then update the computer record (and antibody card if applicable). Initial and date the preliminary report to indicate that the record was updated.
    a. If a patient sample was submitted to Versiti Wisconsin for a molecular genotype, there will be no preliminary report. The above instructions will take place upon receiving the final report only.
    b. If it is unclear how to interpret a reference report (i.e. there are variations or mutations present in a molecular genotype report, or extensive testing performed in a workup with difficult methodology) consult the Supervisor, Lead Technologist, or Medical Director for evaluation.
9. Submit copies of all paperwork for supervisory review.
    a. It is not required to wait for the final report if a preliminary report has been received.
    b. Supervisory review may be started before the reference laboratory report is received, but should not be completed until receiving the reference report.
    c. Royal Oak,Troy, and Farmington Hills Blood Bank: A copy of the reference lab report should be included in all CABID (Consult Antibody Identification with the Blood Bank Medical Director).
10. Bill the patient for the reference work performed if available.
    a. The Versiti IRL's will send a Billing Worksheet either with the preliminary or final report.
11. When the final report is received by the Blood Bank, review the report to confirm it matches the preliminary report, and that the computer record is correct.
12. The technologist will initial and date the final report and submit the report for completion of supervisory review.
13. After review, file the report alphabetically in the designated *Reference Lab file* in the department.

IX. NOTES:

A. If antibody identification is complete and the request is for provision of blood units only (antigen tested RBCs), then a sample may not be required by the reference laboratory. A phone call to the distribution center or performing an online antigen inquiry will usually suffice, and paperwork is generally not required. However, if compatible blood units are extremely rare and the antibody is sufficiently reactive to be useful in screening blood units, a sample may be requested. Such units will only be released if the reference laboratory has confirmed the antibody identification.

B. See the individual Request Forms for IRL hours of operation, phone numbers, and further information regarding sample requirements.

C. Samples designated for testing at Versiti Wisconsin may also be forwarded direct to the Royal Oak Send Out department for processing.

X. REFERENCES:

1. AABB, *Technical Manual,* current edition.

Attachments

Log of Samples Submitted to a Reference Laboratory

Approval Signatures

Step Description	Approver	Date
	Vaishali Pansare: Chief, Pathology	10/18/2022
	Jeremy Powers: Chief, Pathology	10/12/2022
	Muhammad Arshad: Physician	10/7/2022
	Ryan Johnson: OUWB Clinical Faculty	10/5/2022
	Ann Marie Blenc: System Med Dir, Hematopath	10/4/2022
	John Pui: Chief, Pathology	10/4/2022
Policy and Forms Steering Committe (if needed)	Kelly Sartor: Supv, Laboratory	10/4/2022
Policy and Forms Steering Committe (if needed)	Gail Juleff: Project Mgr Policy	10/4/2022
	Kristen Lafond: Mgr Laboratory	10/4/2022
	Hilary Morey: Medical Technologist Lead	10/1/2022
	Ashley Beesley: Mgr Laboratory	9/30/2022
	Katherine Persinger: Mgr Laboratory	9/30/2022

Michael Rasmussen: Supv, Laboratory	9/30/2022
Teresa Lovins: Supv, Laboratory	9/29/2022
Michele Ferla: Medical Technologist Lead	9/28/2022
Kelly Sartor: Supv, Laboratory	9/28/2022
Rebecca Thompson: Medical Technologist Lead	9/28/2022
Karrie Torgerson: Supv, Laboratory	9/28/2022
Brooke Klapatch: Medical Technologist Lead	9/28/2022
Kelly Sartor: Supv, Laboratory	9/28/2022