1. **Principle**

To describe criteria for accepting specimens for compatibility testing.

1. **Scope and Related Policies**
   1. Any specimens with missing and/or wrong name and/or identification number shall not be accepted for pre-transfusion testing.
   2. For patients who have been transfused or pregnant within the last three months, or if history of transfusion or pregnancy is uncertain or unknown, specimens for compatibility testing shall be no more than 96 hours old.9.1
   3. For patients who have not been transfused or pregnant in the past three months, plasma for compatibility testing may be stored and used at any time for compatibility testing during the current hospital admission. 9.1
   4. Request forms shall identify the recipient/patient by family and given names and by the patient’s identification number. Request forms without proper patient identification must not be accepted by the Transfusion Medicine Laboratory (TML).9.1 The request form may be a requisition or an electronic order.
   5. The information on the blood specimen and the request form shall be checked before testing begins. Any discrepancies or errors must be satisfactorily resolved or new specimens collected.9.1
      1. The name and initials or the computer identification code of the person drawing the blood specimen shall be documented. The date and time of collection must also be documented.9.1
   6. The recipient’s blood specimen shall be stored for at least seven days after transfusion.9.1
      1. Specimens must be stored between 1-6 °C. Freezing plasma is not required. To reduce the risk of labeling/identification errors, separation of plasma should only be done in TML.
2. **Specimens**

Specimens collected for pre-transfusion testing (see procedural notes 8.1)

EDTA anticoagulated whole blood

Note: SST, PST and PLUS tubes must not be used for the collection of samples for blood banking procedures.9.3

1. **Materials**

**Supplies:** Request form or electronic order entry

1. **Quality Control – N/A**
2. **Procedure**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| * 1. Verify specimens and corresponding request form (or electronic order entry) | * 1. Ensure the following information is identical:      * Patient’s identification number * Patient family and given names  |  |  | | --- | --- | | *If* | *Then* | | Any of the above is missing or incorrect | The specimen(s) must not be used. A new specimen must be collected. Complete an incident report according to facility procedures and submit it to a supervisor | | Specimen has been collected for tests other than pre-transfusion testing (e.g., DAT, cold agglutinin screen) | The specimen labeling criteria should conform to established laboratory practice | |
| * 1. Verify collection information on labels | 1. Ensure the following information is on the labels  * Date and time of collection * Identification of the phlebotomist as per facility procedure (name, initials or computer identification) |
| * 1. Verify information on the request form (or electronic order entry): | 1. Ensure the following information is on the request form:  * Physician’s name * Intended date of transfusion and indication  |  |  | | --- | --- | | *If* | *Then* | | Above information is missing | Obtain this information from the ward | |
| * 1. Verify the age of the specimen | 6.4.1 Review the patient’s transfusion   history and the date and time of   specimen collection to ensure the   intended date of transfusion is   within an acceptable time period.   See Scope and Related Policies 2.2   to 2.3 and Procedural Notes 8.2.  6.4.2 If the time period is unacceptable,   arrange to have another specimen   collected. |
| * 1. Visually check specimens for acceptability. See Procedural Notes 8.3. | 6.5.1 If abnormal appearance is present,   record on the request form or in the   computer. Refer to procedural note   8.3.  6.5.2 Report findings of abnormal   appearance to senior technologist   or designate for discussion with TM   medical director to determine if   clinically significant.  6.5.3 Rejected specimens must be   documented and action taken   according to hospital policy. |

1. **Reporting – N/A**
2. **Procedural Notes**
   1. If an EDTA sample is not available and a clotted sample has been collected from a patient treated with heparin, it may not clot

properly. Adding thrombin or protamine sulphate to the sample according to established procedures usually corrects the problem. See SP.024 Thrombin/Protamine Sulphate for Incomplete Clotting

* 1. Calculating the age of a specimen:

If the patient has been transfused or pregnant in the preceding three months with blood or a blood component containing allogeneic red cells or if the history is uncertain or unavailable, a sample shall be obtained for the patient within 96 hours of the scheduled transfusion.9.2 For example, a specimen collected early in the morning of April 10 may be used for pre-transfusion testing up to the early morning of April 14. Some hospitals use the following calculation for ease of operations:

* If Day “0” is the day of collection the sample is valid until midnight of Day “3”. This will ensure that if a new sample is required, it will be placed on the draw list for the following day

If your hospital LIS is capable of calculating the 96 hours and/or it is operationally feasible to draw the new sample and ensure it will be within the 96 hour limit, alternative policies can be implemented.

If the patient has not been transfused or pregnant in the preceding three months, the sample can be used for a time specified by your facility policy.9.3

* 1. Specimen Appearance/Rejection Criteria.
     1. Abnormal plasma color such as red, brown or dark amber may indicate the presence of intravascular or delayed hemolysis or hemolysis due to improper collection
     2. Agglutination in the EDTA specimen could be caused by the presence of a cold autoagglutinin. Warming the specimen may be required.
     3. Very low hematocrit may be due to contamination with intravenous (IV) fluid. If this is verified by the specimen phlebotomist, obtain another specimen.

Note: Specimens collected from an intravenous line are acceptable if the line is first flushed with saline and the first 5mL of blood are withdrawn and discarded before collecting the specimen.

1. **References**
   1. Standards for Hospital Transfusion Services Version 3 – February 2011. Canadian Society for Transfusion Medicine, 5.2.3.; 5.2.4
   2. CSA Z902-10 Standard for Blood and Blood Components. Canadian Standards Association March 2010. 10.4.2.
   3. Roback JD ed. AABB Technical Manual 17th edition, Bethesda MD; 2011: 437-442, 447.
2. **Revision History**

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| --- | --- |
| **Revision Date** | **Summary of Revision** |
| January 31, 2014  October 30, 2014 | * Revised name of manual * Revised wording in Section 6.1- removed reference to transfusion specific identification band * Revised wording in Section 6.2 to include “as per facility procedure” * Changed title from “medical chief” to “TM Medical Director” in subsection 6.5.2 * Added “See procedural notes 8.1” to section 3.0 *Specimens* * Revised wording of section 8.2 to include pregnancy. Cited reference “9.3”.”Added “if the patient has not been transfused or pregnant in the preceding three months, the sample can be used for a time specified by your facility policy.” * Revised wording to include “ hemolysis due to improper collection” in subsection 8.3.1 * Revised sentence structure of the *Note* in subsection 8.3.3. * Updated the list of references to include the most up to date editions/versions and updated the location cited within the reference as necessary. * Added note that if operationally can calculate the 96hours for sample recollection alternative policies may be used. |