**Purpose**

To provide guidelines for the testing and resulting of eluates and to describe the exclusion and confirmation techniques used for the process.

**Policy**

The HMC TSL uses the Elution technique as follows:

* To identify clinically significant antibodies that are bound to a patient’s red cells, in order to provide antigen negative units for the patient.
* To provide clinical diagnostic information to the medical staff in order to provide better patient care.

**Interpretation**

**Positive Result:** Presence of hemolysis or agglutination at any phase of testing indicates the presence of antibody. Report the results in Sunquest using appropriate antibody codes.

**Negative Result:** Absence of agglutination or hemolysis through all the steps of testing indicates that the antibody is not present. Report the results in Sunquest using code ~~NOAD~~ NOABE (No antibody activity demonstrated in eluate).

**Rule-outs:** Rule-outs should be performed per antibody identification guidelines.

**Sample Requirements**

* Purple or Pink Top EDTA
* Retain sufficient cells and plasma in the original tube for compatibility testing.
* Order entered as battery DAT
* Perform DAT prior to performing eluate.

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| --- | --- | --- | --- |
|  | **Storage** | **Testing** | **Retention** |
| **Original Sample** | 2-8°C | Within 3 days of draw | 30 days |
| **Eluate** | 2-8°C | Within 6 days of draw | 7 days |

**Testing Frequency**

* Initial Samples will be tested based on the process below.
* Subsequent Samples will be retested only when the patient has been transfused within the previous three months, ***and*** there is a clinical indication for subsequent elution, i.e. the patient is having a delayed transfusion reaction, and there is reason to suspect new antibody activity. Consult TSL manager or medical director if there is any question.

**Procedure**

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| --- | --- | --- |
| **Step** | **Action** | **Related Documents** |
| 1. | In addition to the Guidelines for Antibody Identification, the following steps must be completed:* Review by a 2nd tech prior to the release of results or blood products
* Describe additional steps to be considered on the Antibody ID Worksheet.
* Confirm any allocated red blood cells are antigen negative for any clinically significant alloantibodies detected in the eluate.
 | * Guidelines for Antibody Identification
 |
| 2. | Following the identification of a clinically significant alloantibody in the eluate, * Review plasma/serum testing
* Perform enhanced techniques to confirm antibody in the eluate is not present in the patient plasma.
 | * Antibody Screen by Polyethylene Glycol (PEG) Tube IAT Method
* Antibody Panel using Enzyme-Treated Cells
 |
| 3.  | For non-group O patients* If the eluate is non-reactive with group O reagent red cells:
	+ Review Transfusion Data printout to determine if out of group blood components have been transfused.
	+ Include Transfusion Data in the patient folder.
* If patient has received out of group blood components during the last 28 days, include A1 and B reagent red cell testing for ABO isoagglutinins:
	+ Last wash
	+ Eluate
 |  |
| 4. | Result eluate under test ELU:* Non-reactive eluate: ~~NOAD~~ NOABE – no antibody activity demonstrated in eluate
* Identified antibody: appropriate SQ antibody code
* Multiple eluates should have a Comment in the BAD file including the date of testing.
	+ Example: Non-reactive eluate 03172014, 3757

 ANTI JKA 02112014, 1234 | SQ Blood Order Processing Test Result Guide |
| 5. | Contact the Medical Director if there are any questions concerning eluate testing and/or findings. |  |

**Related Documents**

* **Antibody Elution Using Gamma EluKit**
* **Eluate Testing Form**
* **Sample Management Process**

**Eluate Testing Process**



**References**

Package Insert Gamma ELU-KIT™ II IC3021-2

Package Insert Gamma PeG™ IC3026-3

AABB Technical Manual, Current Edition

Judd’s Methods in Immunohematology, Current Edition

AABB Technical Manual, Current Edition

AABB Standards for Blood Banks and Transfusion Services, Current Edition