**Purpose**: To provide a technique to resolve testing discrepancies and/or unexpected reactions due to rouleaux formation. Patient plasma with altered protein proportions, abnormal proteins or high concentrations of fibrin may cause rouleaux formation that resembles true agglutination.

**Procedure:**

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents Title** |
| **1.** | * Confirm sample for acceptability per established procedures.
* Confirm presence of rouleaux microscopically.
 | * ABO Discrepancy Resolution
* Sample Acceptance Evaluation
 |
| **2.**  | * Repeat manual tube method if not already done.
 | * ABO/D Typing by Tube Method
* Crossmatch by Immediate Spin Tube Method
 |
| **3.** | * If discrepancy is not resolved, proceed to step 4.
 |  |
| **4.** | * Centrifuge the reaction tubes containing patient plasma. Do not resuspend the cells.
 |  |
| **5.** | * Use a disposable transfer pipet to draw the supernatant plasma and discard.
 |  |
| **6.** | * Add two drops of **0.85%** saline to each tube.
* Spin reaction tube(s)
 |  |
| **7.** | * Gently resuspend and observe macroscopically for agglutination.
 |  |
| **8.** | * Grade and record results.
 | * Reading and Grading Tube Hemagglutination Reactions
* ABO/D Discrepancy Worksheet
 |
| **9.**  | **Interpret results as follows:** | * ABO Discrepancy Resolution
 |
| * No agglutination
 | * Rouleaux formation
 |
| * Agglutination
 | * True agglutination not due to rouleaux
 |

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents Title** |
| **10.** | * **If discrepancy resolved**:
	+ Result test
	+ Update BAD file with “rouleaux” and “saline replacement technique”.
 | Blood Order Processing Test Result Guide |
| **11.** | * **If discrepancy is NOT resolved:**
	+ Perform additional problem investigation
	+ Issue universal donor blood components until discrepancy is resolved.
 | * ABO Discrepancy Resolution
* Identification of Cold-Reacting Antibodies
 |

**References:**

AABB Technical Manual, Current Edition.