**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** |
| 1 | Confirm sample for acceptability per established procedures.  Confirm presence of rouleaux microscopically. | | | ABO Discrepancy Resolution  Sample Acceptance Evaluation |
| 2 | **IF** | | **THEN** | ABO/D Typing by Tube Method  Crossmatch by Immediate Spin Tube Method |
| No previous history of rouleaux | | Repeat manual tube method and include autocontrol. |
| History of rouleaux | | Repeat manual 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 carefully remove the plasma from the tube(s) leaving the red cell button undisturbed | | |  |
| 6 | Add two drops of **0.85%** saline to each tube. | | |  |
| 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 | |
| 10 | **If discrepancy resolved**:   * Result test * Update BAD file with rouleaux and saline replacement technique, Date, Time, and Tech ID. | | | Blood Order Processing Test Result Guide  ABO/D Discrepancy Worksheet |
| 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.