ABO/RH BLOOD TYPING LAB

LAB 8
THE **PURPOSE** OF THIS LAB IS TO PERFORM A SLIDE ABO/RH BLOOD TYPING PROCEDURE, DISCUSS THE CLINICAL SIGNIFICANCE OF ABO/RH BLOOD TYPING, AND HOW ANTIGENS AND ANTIBODIES RELATE TO THE BLOOD TYPING PROCEDURE.
MATERIALS

• WHOLE BLOOD
• ANTI-D (RH) ANTISERUM
• ANTI-A ANTISERUM

• ANTI-B ANTISERUM
• PLASTIC PIPETTE

• RH VIEW BOX
• APPLICATOR STICKS

• BLOOD TYPING SLIDE
- WORK MAT
  (PAPER TOWEL)
- LABORATORY COAT
• **DISINFECTING WIPES**

• **BIOHAZARD CONTAINERS**
IF DOING FINGER STICK...

• ALCOHOL SWABS

• BAND-AID
• LANCET

• STERILE COTTON
IF USING TEST TUBES...

• SEROFUGE

• TEST TUBES
Procedure...
BEFORE YOU BEGIN THE LAB, YOU LABEL THE TEST TUBE WITH YOUR SEAT NUMBER ON THE TOP OF THE TEST TUBES AND A, B AND RH AT THE BOTTOM, EACH AT THREE DIFFERENT PLACES ON THE TEST TUBE.

1.) MIX ANTISERUM
2.) Place 2 vertical free falling drop of anti- A, B, and D (RH) in the labeled test tubes (or wells).
3.) MIX BLOOD WELL, AND PLACE A SMALL DROP OF BLOOD IN EACH TEST TUBE OR WELL.
4.) MIX THE “A” WELL WITH AN APPLICATOR STICK.

(FOR TEST TUBES, SPIN IN THE SEROFUGE FOR 30-60 SECONDS)
5.) ROTATE TYPING SLIDE FOR TWO MINUTES AND INTERPRET ABO BLOOD TYPE.
6.) PLACE SLIDE VERTICALLY ON THE RH VIEW BOX, ROCK SLIDE BACK AND FORTH ON THE VIEW BOX FOR ONE MINUTE, THEN INTERPRET RH DATA.
7.) REPLACE AND DISPOSE OF ALL SUPPLIES AND EQUIPMENT ACCORDING TO INSTRUCTOR (ALSO SEE LAB DISPOSAL BOOK). SHEET ON WALL.
8. DISINFECT TOP AND BOTTOM WORK AREA, TEST TUBE RACK, AND ANY OTHER ITEM THAT MAY BE CONTAMINATED WITH BODY FLUIDS.
RAW DATA/ CALCULATIONS

• DRAW YOUR SLIDE REACTIONS TO SHOW AGGLUTINATION IN EACH WELL BY USING THE AGGLUTINATION PICTURES.
NORMAL RANGES: N/A
RESULTS:
ABO/RH BLOOD TYPE

LOOK AT THE PICTURES ON LABSHEET TO HELP INTERPRET RESULTS.
CONCLUSION

STATE WHETHER YOUR BLOOD TYPE IS THE MOST COMMON, THE LEAST COMMON OR NEITHER, FROM WHICH BLOOD TYPE(S) YOU CAN RECEIVE BLOOD, AND TO WHICH BLOOD TYPE(S) YOU CAN DONATE BLOOD.

Most common in all ethnic groups is **Type O**.
Least common type in all ethnic groups is **Type AB**.
Types that vary due to ethnic origin are **Type A** and **Type B**.
WHAT IS THIS BLOOD TYPE?
BLOOD TYPE A/RH+
WHAT IS THIS BLOOD TYPE?
BLOOD TYPE B / RH-:

![Diagram showing blood type B antigens and antibodies](image)
WHAT IS THIS BLOOD TYPE?

Anti A

Anti B

Anti R(h)
BLOOD TYPE AB / RH+:

Anti A
Anti B
Anti R(h)
WHAT IS THIS BLOOD TYPE?
BLOOD TYPE O / RH-:

Anti A

Anti B

Anti R(h)
6 IMPORTANT REASONS FOR KNOWING YOUR BLOOD TYPE

1. TRANSFUSIONS
2. ORGAN DONATIONS
3. PATERNITY DISPUTES
4. FORENSICS
5. FAMILY TREE (GENOTYPE/PHENOTYPE)
6. ADOPTIONS?? ⭐️
QUESTIONS...

Answer using your notes and text books.
1. WHAT HAPPENS IF THE PATIENT RECEIVES THE WRONG TYPE OF BLOOD?

2. DETERMINE THE ABO BLOOD TYPE THE DONOR MUST HAVE TO GIVE RED CELLS TO EACH OF THE FOLLOWING RECIPIENTS?

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3.) WHO IS THE UNIVERSAL DONOR?

4.) WHO IS THE UNIVERSAL RECIPIENT?

5.) DETERMINE THE RH FACTOR OF THE OFFSPRING RESULTING FROM EACH MARRIAGE.

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<th>PHENOTYPE AND PERCENTAGES</th>
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