

**S.V.A. GOVERNMENT COLLEGE, SRIKALAHASTI**  
**DEPARTMENT OF ZOOLOGY**  
**BEST PRACTICE II**

### **1. Title of Practice**

#### **Blood Grouping Tests for Staff and Students: A Vital Safety Measure**

### **2. Objectives**

- To ensure the availability of blood for emergency situations within the college premises.
- To promote blood donation among staff and students.
- To raise awareness about blood donation and the importance of blood grouping.
- To provide a safe and efficient blood grouping process for students and staff.

### **3. The Context**

S.V.A. Govt. College, Srikalahasti, is a large educational institution with a diverse student body and faculty. Given the potential for accidents or medical emergencies on campus, it is crucial to have a robust system in place to ensure the availability of blood for immediate transfusion. Blood grouping tests are essential for identifying compatible blood types, facilitating timely and effective blood transfusions in case of emergencies.

### **4. Practice**

The Department of Zoology has implemented a comprehensive blood grouping program for all staff and students. This program involves periodic blood grouping tests, blood donation drives, and educational campaigns to promote awareness about blood donation.

### **5. Method**

- **Blood Grouping Tests:** Regular blood grouping tests are conducted for all staff and students. The tests are performed by trained medical professionals using standardized procedures.

- **Blood Donation Drives:** The department organizes regular blood donation drives in collaboration with local blood banks. These drives provide an opportunity for staff and students to contribute to the blood bank and save lives.
- **Educational Campaigns:** The department conducts educational campaigns to raise awareness about the importance of blood donation, blood grouping, and blood transfusion. These campaigns include lectures, workshops, and posters.

### A Detailed Method for Blood Group Detection

**Blood group detection** is a crucial procedure in medical practice to ensure safe blood transfusions. The most common method used for blood group determination is **agglutination**, which is the clumping of red blood cells when they come into contact with antibodies against specific blood group antigens.

#### Materials Required:

- Blood sample
- Anti-A serum
- Anti-B serum
- Anti-D serum (Rh factor)
- Slide or microtiter plate
- Glass rod or disposable pipette
- Protective equipment (gloves, lab coat)

#### Procedure:

1. **Prepare the slide or microtiter plate:** Divide the slide or plate into three sections.
2. **Add blood sample:** Place a small drop of blood in each section.
3. **Add antisera:**
  - **Section 1:** Add a drop of anti-A serum.
  - **Section 2:** Add a drop of anti-B serum.
  - **Section 3:** Add a drop of anti-D serum.
4. **Mix:** Gently mix the blood and antisera in each section using a glass rod or disposable pipette.
5. **Observe for agglutination:**
  - **Agglutination:** If the red blood cells clump together, it indicates a positive reaction.
  - **No agglutination:** If the red blood cells remain dispersed, it indicates a negative reaction.

### Interpretation of Results:

- **Blood Group A:** Agglutination with anti-A serum only.
- **Blood Group B:** Agglutination with anti-B serum only.
- **Blood Group AB:** Agglutination with both anti-A and anti-B sera.
- **Blood Group O:** No agglutination with either anti-A or anti-B serum.
- **Rh positive:** Agglutination with anti-D serum.
- **Rh negative:** No agglutination with anti-D serum.

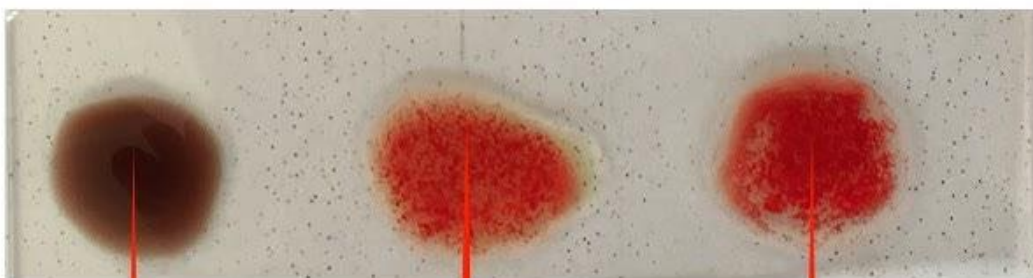
### Precautions:

- Always use sterile equipment and materials to prevent contamination.
- Handle blood samples with care to avoid accidents and exposure to blood borne pathogens.
- Follow proper laboratory safety procedures.

## 6. Evidence of Success

- The blood grouping program has significantly enhanced the preparedness of the college to handle emergencies requiring blood transfusions.
- The program has fostered a culture of blood donation among staff and students, leading to a steady supply of blood for the college's medical unit and local blood banks.
- The educational campaigns have been successful in raising awareness among the college community about blood donation and blood grouping.

## BLOOD GROUP DETERMINATION







































A Remain Same as Earlier

B Shows Agglutination


D Shows Agglutination so its +

**Final Result- The Blood Group is B+ (B Positive)**

## Blood Type - ABO TYPING

BLOOD TYPE	ANTI-A	ANTI-B	ANTI-D	CONTROL
O-POSITIVE				
O-NEGATIVE				
A-POSITIVE				
A-NEGATIVE				
B-POSITIVE				
B-NEGATIVE				
AB-POSITIVE				
AB-NEGATIVE				
INVALID				



  
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