

# **BLOOD CELL COUNTS, BLOOD CULTURE**

Presented By  
Mrs. Divya K M  
Associate Professor  
MES College of Nursing

- Haemocytometer

The haemocytometer is an instrument used for counting blood cells. It consists of a counting chamber and 2 pipettes.

# Haemocytometer





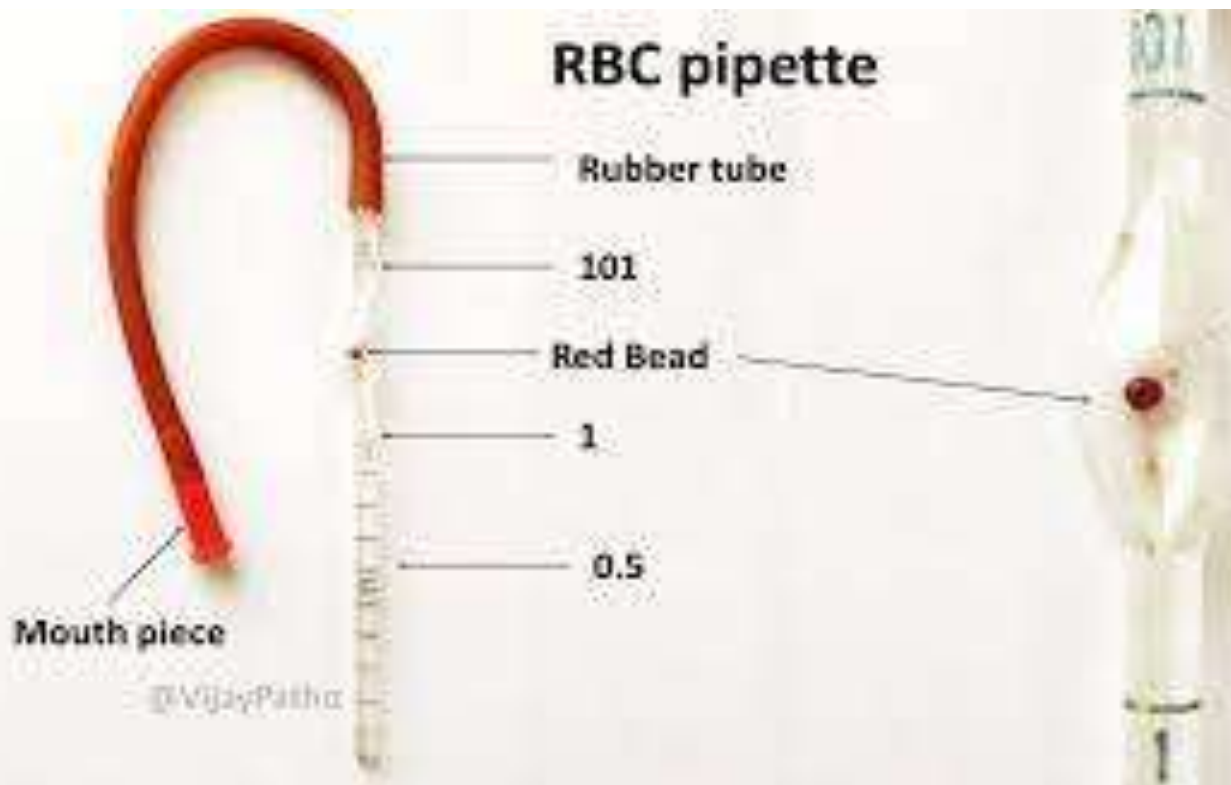


# RED CELL COUNT

- Red cell pipette

- ❑ This consist of a graduated capillary tube divided into 10 parts marked 0.5 at 5<sup>th</sup> mark and 1.0 at 10<sup>th</sup> mark.
- ❑ The capillary tube open into a mixing bulb containing a glass bead which facilitates mixing of blood and the diluent.
- ❑ Diluting fluid – 1% formalin in 3% sodium citrate, 0.85gm sodium chloride in 100ml distilled water

## RBC pipette



@VijayPatha





- ❑ Capillary tube above the bulb is marked 101 on the red cell pipette. This tube is attached to an aspirating tube.
- ❑ In the red cell pipette blood is drawn upto the 0.5 mark and the diluent upto 101 mark.

# Normal range of RBC count

- Adult male 4.5-5.5 millions/cumm
- Adult female 3.8-5.2million/cumm
- At birth 4.0-6.0 million/cumm

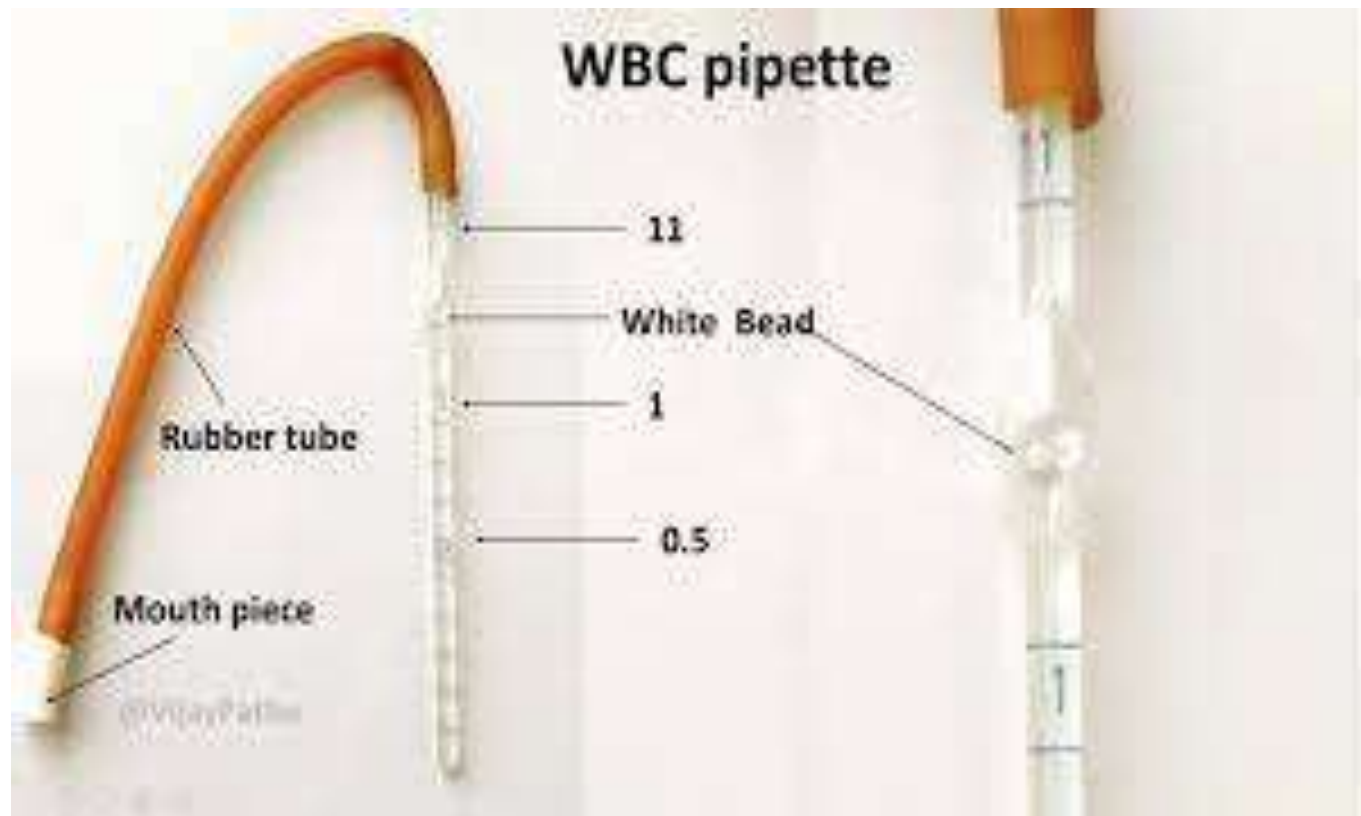
# WBC COUNT

# WBC COUNT

- **WBC pipette**

- This contains a white glass bead within the bulb
- It has got 3 markings 0.5, 1.0 and 11.
- It is provided with an aspiration tube

## WBC pipette



- In the white cell pipette blood is drawn and upto 0.5 mark and diluent upto 11 mark

# Normal range of WBC

- Normal WBC 4000-11000 /cumm
- Normal differential count

Neutrophil 40-75%

Lymphocyte 20-45%

Monocyte 2-10%

Eosinophil 1-6%

Basophil 0-1%

# Blood culture



## What is a Blood Culture?

- A blood culture is a laboratory test in which blood is injected into bottles with culture media to determine whether microorganisms have invaded the patient's bloodstream.



# Specimen collection

- Blood samples should be collected with full aseptic precautions using a dry sterile syringe.
- A fresh sterile needle is used to inoculate the bottle of culture medium
- The most favorable time for taking a blood culture is at the peak of temperature

# Procedure

- The blood is inoculated into brain heart infusion broth or glucose broth and incubated at 37 degree celcius for 18-24 hours. Then it is subcultured on to blood agar
- MacConkey agar and Chocolate agar which is incubated at 37 degree celcius for 18-24hours
- If it is negative subculture is repeated at 4days and 7days before giving a negative report

- If there is any growth on subculture the organism is identified by biochemical and serological method.
- Antibiotic sensitivity testing is performed on the isolate.



Thank  
you