

UNI-SEP_{VAC}

Cat. no. U-07 - Sodium Citrate

FOR DENSITY GRADIENT SEPARATION OF LYMPHOCYTES

INTRODUCTION: Density gradient centrifugation is the method of choice for isolation of lymphocytes. The success of the procedure, i.e. the recovery of viable lymphocytes with the lowest proportion of contaminating granulocytes and erythrocytes, depends to a large extent on the careful layering of the blood sample onto the separation medium and the maintenance of a sharp interface between the two solutions prior to centrifugation. To this end UNI-SEP* was developed.

The UNI-SEP_{VAC} system allows the blood sample to be drawn directly into the centrifuge tube with no special precautions required. Thus, a large number of samples may be handled at the same time with no manipulation of the blood.

PRINCIPLE: UNI-SEP_{VAC} is a sterile plastic centrifuge tube containing 3 ml of NycoprepTM (density 1.077 g/ml, osmolality 295 mOsm), which is sequestered in the bottom of the tube by a one-way plastic insert. Air has been removed from the tube to allow automatic filling with 4 ml of blood. **Sodium citrate** is included in the upper chamber as anticoagulant. Blood drawn onto the insert does not disrupt the surface of the NycoprepTM layer. During centrifugation the insert opens to permit mixing of the blood and NycoprepTM.

Red blood cells and granulocytes are sedimented to the bottom of the tube while the white blood cells migrate to the interface between the plasma and NycoprepTM layers. They are readily identified as a discrete white band located above the plastic insert.

INSTRUCTIONS:

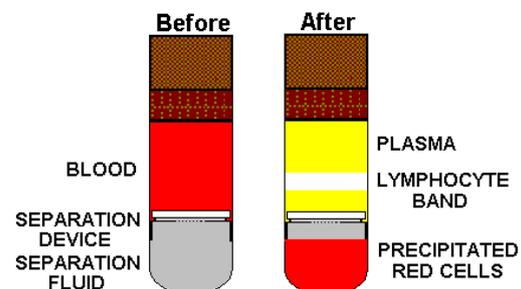
IN THE CLINIC



I. The needle for the vacuum system comes with a colored and white section connected by a tamper proof seal. Holding the colored section remove the white section to reveal one end of the needle that is covered in gray rubber. This is then screwed into the holder. The blood tubes will be pushed on to this end of the needle when ready to sample blood. Once you have gained access to the vein use your nondominant hand to support the equipment and use your dominant hand to push the blood tube into the holder and on to the rubber sheathed needle. Blood will flow into the tube until the vacuum is exhausted

II. Disengage the tube and push the next tube into the holder for sampling if necessary. Once you have finished venepuncture the needle should be disengaged from the holder and disposed into a universal sharps box.

IN THE LABORATORY



III. Centrifuge (18-20 °C) 1000 x g for 20 min. Procedures carried out at lower temperature may require longer centrifugation.

Erythrocytes, dead cells and PMNs (polymorphonuclear leukocytes or granulocytes) are found at the bottom of the tube. The UNI-SEP insert separates the lymphocyte interface from the pellet of packed erythrocytes.

IV. Remove the mononuclear layer with the aid of a pipette. Alternatively, the entire contents of the tube above the plastic insert may be removed by decanting the solution.

STORAGE: Store at or below 20 °C out of direct light. Do not use after expiration date shown on label.

FOR RESEARCH USE ONLY!