

Advantage of Leucoreduced (LR) blood product :

- Prevent Febrile Non-Hemolytic Transfusion Reactions (FNHTR)

Advantages of Leucodepleted (LD) blood products :

- Prevent CMV transmission
- Prevent leukocyte alloimmunization
- Prevent refractoriness to platelet transfusion
- Lower post-operative infection rate
- Lower post-operative multi organ dysfunction

LBC provides the following Leucoreduced / Leucodepleted blood products :

- Leucoreduced packed red cells [1 log (70-80%) WBC depletion by buffy coat removal]
- Leucodepleted red cells [3-4 log (more than 99%) WBC depleted]
- Leucodepleted single donor platelets [3-4 log (more than 99%) WBC depleted]

LEUCOCYTE REDUCED & DEPLETED BLOOD COMPONENTS
- A SAFER OPTION FOR PATIENT

Head Quarters

Project 'Life'

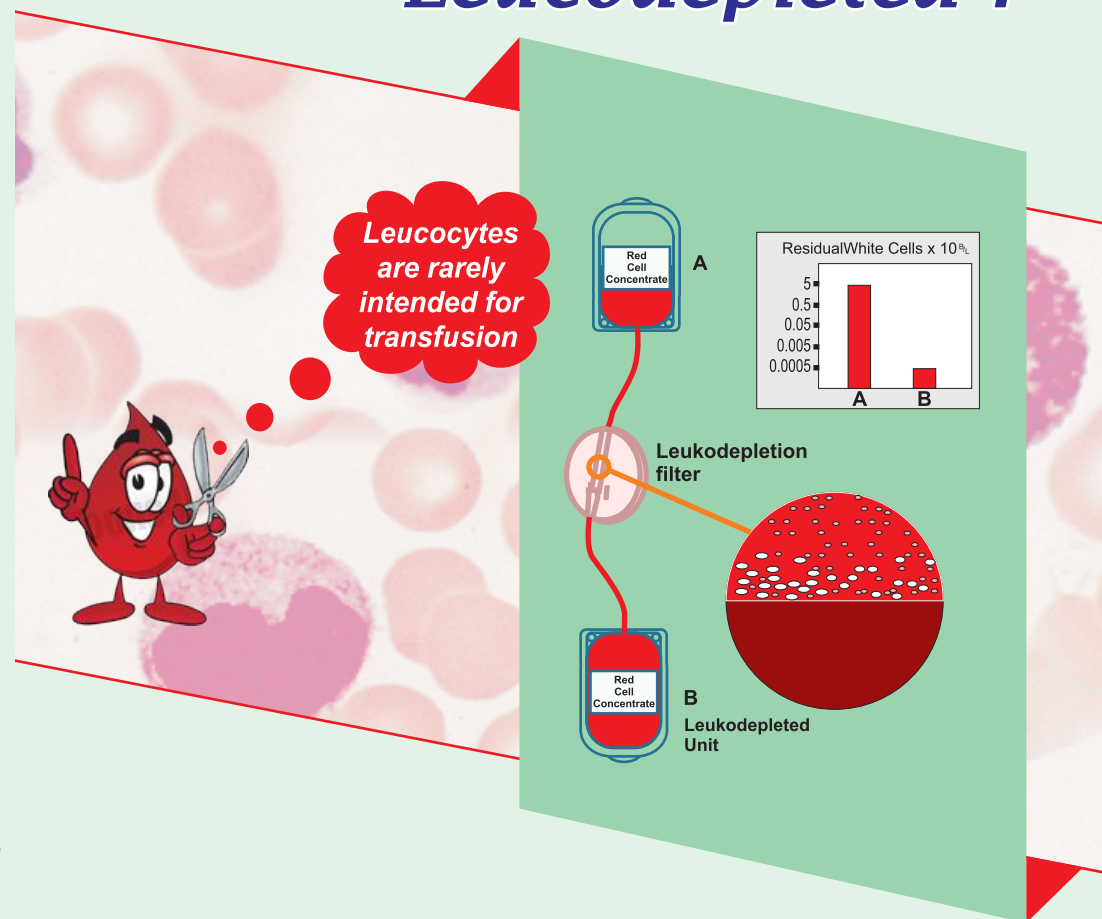
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Why Leucoreduced / Leucodepleted ?



Life Blood Centre

Unparalleled blood safety & quality, non-stop commitment

(Formerly known as Rajkot Voluntary Blood Bank & Research Centre)

(NABH Accredited Regional Blood Transfusion Centre)

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What is Leucodepletion?

- ↪ Fresh cellular blood components such as Whole blood, red cells and platelet concentrates contain a variable number of donor white cells (leucocytes).
- ↪ Even non-cellular components, such as fresh frozen plasma and cryoprecipitate may contain a small number of white cells.
- ↪ Leucodepletion is a process that removes these white cells from blood components usually by means of a special filter.
- ↪ Leucodepleted blood components should contain less than 5×10^6 white cells per unit.
- ↪ White cells can be removed either in the laboratory before storage (**pre-storage leuco-depletion**) or at the bedside using special filters (**bedside leucodepletion**).

Why Leucodeplete ?

- ↪ Leucodepletion brings a number of additional benefits. These include :
 - Reduction of febrile non-haemolytic transfusion reactions.
 - Prevention of primary immunisation to human leucocyte antigens.
 - Prevention of platelet refractoriness due to alloimmunisation.
 - Reduced risk of CMV transmissions.
 - ↪ Leucodepletion has other advantages as well :
 - It may reduce the risk of other leucocyte-associated blood borne infections, i.e.
 - i. Less transmission of HTLV 1 and 2.
 - ii. Less risk of inadvertent bacterial contamination of blood components.
- It reduces the risk of peri-operative infection.



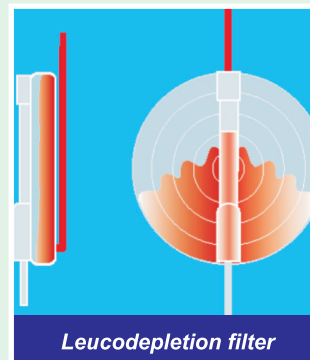
**Leucodepletion
of Red Cells
in the Laboratory**

What is the difference between bedside filtration and pre-storage filtration?

- ↪ **Pre-storage leucodepletion** refers to removal of leucocytes from blood components **early in the component preparation process**.
- ↪ Pre-storage leucodepletion is **safer & more reliable** than the bedside process.
- ↪ As the white cells are removed before fragmentation there is **less release of cytokines** and the infective agents present in the leucocytes.
- ↪ As a consequence patients may experience **fewer transfusion reactions** and other complications of transfusions.
- ↪ As the process is carried out in a laboratory environment there is high quality **process control, better quality standards and potentially better patient outcome**.
- ↪ It will also remove **problems associated with bedside filtration** such as **clogged white cell filters**. This will also result in **Leucodepletion filter saving of nursing time**.



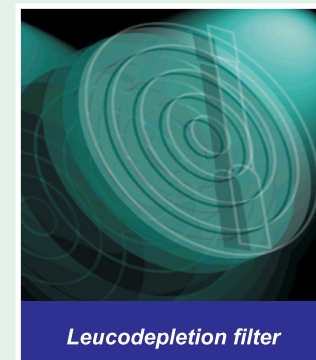
**Leucodepletion of Red Cells
in the Laboratory**



Leucodepletion filter



**Automated
Component extractor**



Leucodepletion filter