



<b>Department:</b>	Laboratory and Blood Bank (Microbiology)		
<b>Document:</b>	Internal Policy and Procedure		
<b>Title:</b>	Handling & Used Of Irradiated Cellular Blood Products		
<b>Applies To:</b>	All Laboratory Staff		
<b>Preparation Date:</b>	January 06, 2025	<b>Index No:</b>	LB-IPP-265
<b>Approval Date:</b>	January 20, 2025	<b>Version :</b>	NEW
<b>Effective Date:</b>	February 20, 2025	<b>Replacement No.:</b>	
<b>Review Date:</b>	February 20, 2028	<b>No. of Pages:</b>	03

## 1. PURPOSE:

- 1.1 The purpose of this policy is to provide guidance to staff to follow the process of irradiated blood components preparation and separation.
- 1.2 To outline recipients who are to receive irradiated blood components.

## 2. DEFINITIONS:

QC- Quality Control

## 3. POLICY:

- 3.1 In accordance with Standards for Blood Banks and Transfusion Services (AABB standards J8,400), it is the policy of MCH Blood Bank that:
  - 3.1.1 All patients at risk of developing Graft versus Host Disease will receive irradiated cellular blood components
  - 3.1.2 The product will be permanently labeled as irradiated and the expiry of RBCs will not exceed 28 days.
  - 3.1.3 Blood components include PRBCs, Platelets, and Granulocytes.
  - 3.1.4 There shall be a process to ensure that all irradiated blood components are stored and transported properly and QC is checked.

## 4. PROCEDURE:

- 4.1 For Preparation of irradiated blood components: Not applicable
  - 4.1.1 Ensure that the electrical cord is plugged in.
  - 4.1.2 Turn the power key switch to reset position and release.
  - 4.1.3 Ensure the switch remains in the ON position.
  - 4.1.4 Check that the time is set correctly to deliver 2500 rads (25 GY).
  - 4.1.5 Attach irradiation indication label to the product unit.
  - 4.1.6 Insert the product into canister.
    - 4.1.6.1 Place the canister into the turn table, adjust its position according to the red lines, and close the radiation chamber door.
    - 4.1.6.2 Press the start switch.
    - 4.1.6.3 The irradiation is terminated automatically
  - 4.1.7 Expiry of PRBCs will not exceed 28 days or the original expiry date whichever is first
  - 4.1.8 One (01) % of the monthly irradiated cell components - but not less than Seventy-five
  - 4.1.9 Seventy five (75) % of the tested units must have minimum normal parameter according to the cell component.
  - 4.1.10 Indications of use of irradiated cellular blood products
 

Irradiated blood components are recommended for but are not limited to the following recipients to reduce the risk of GVHD (graft-vs-host disease):

All individuals with chronic graft-vs-host disease

Patients with congenital immune deficiencies or hodgkin lymphoma  
Patients receiving nucleoside analogues or alemtuzumab  
Recipients of stem cell or bone marrow transplants  
Recipients of directed donations from family members  
Recipients of HLA-compatible single donor platelets and granulocyte transfusions

#### 4.2 Records Management

The recipient transfusion data file in Transfusion Medicine Laboratory shall be retained indefinitely.  
All transfusion records in the recipient's medical chart shall be retained in accordance with Hospital retention policy for medical records.

#### 4.3 Quality control

- 4.3.1 Irradiated blood components shall not be used after the expiry date
- 4.3.2 All Irradiated blood components shall be appropriately labelled as irradiated for positive visual verification

### 5. MATERIAL AND EQUIPMENT:

- 5.1 A Gamma irradiation source.
- 5.2 Canister.
- 5.3 25 GY blood irradiation indicator label.
- 5.4 Irradiated label.
- 5.5 Gamma irradiation request form.

### 6. RESPONSIBILITIES:

- 6.1 All Blood Bank Staff
- 6.2 Blood Bank supervisor
- 6.3 Blood Bank Physician.

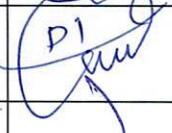
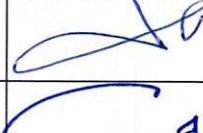
### 7. APPENDICES:

- 7.1 N/A

### 8. REFERENCES:

- 8.1 ImmunoCard Toxins A&B detection Kit; meridian bioscience
- 8.2 <https://www.mayoclinic.org>: Clostridium difficile infection – diagnosis & treatment.

**9. APPROVALS:**

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