BLOOD COMPONENT MONOGRAPH
BUFFY COAT

REASON FOR ISSUE: Update to include ISBT 128 component codes, and label changes.

Council of Europe Guide Monograph	NA
eProgesa Component Names	Buffy Coat
eProgesa Component Codes	16460, E6113V00

1. DEFINITION AND PROPERTIES

Buffy Coat is a suspension of granulocytes prepared from a single whole blood donation and suspended in plasma.

Buffy Coat contains not less than 0.5 x 10^9 granulocytes per unit in a volume of 35 - 65 mL.

Buffy Coat has a significant content of red blood cells, lymphocytes and platelets.

Buffy Coat must be irradiated.

2. PREPARATION

The component must be stored in a pack that allows gas exchange (i.e. a platelet pack). Preparation involves the transfer of individual buffy coats prepared from a single whole blood donation into a platelet storage pack.

3. REQUIREMENTS AND QUALITY CONTROL

The table below lists the requirements to comply with NZBS Manufacturing Standards 112P003 Standards for Infectious Marker Testing and 112P004 Standards for Blood Group Serology.

Table 1: Release Requirements:

Parameter	Requirements	Frequency of control
ABO, RhD	Grouping	All units
Anti-HIV 1 & 2	Negative by approved screening test	
HBsAg	Negative by approved screening test	
Anti-HCV	Negative by approved screening test	
Volume[1]	35 – 65 mL	
Granulocytes[1]	≥ 0.5 x 10^9 / unit	
HLA *(when required)*	Typing	As required
CMV	Negative	

1. A minimum of 75% of components must meet the criteria

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4. STORAGE AND TRANSPORT

4.1 Storage

Buffy Coat should be used as soon as possible after preparation. If storage is unavoidable it should be stored at a temperature of +22 ± 2°C for up to 24 hours. Do not agitate during storage.

Irradiation has no effect on storage condition or shelf life.

4.2 Transport

Transport temperature must be kept as close as possible to the recommended storage temperature and the system must be validated to ensure that the transport temperature does not vary significantly from the recommended +22 ± 2°C. Unless for immediate use, the component should be transferred to storage at a temperature of +22 ± 2°C.

5. LABELLING

The following information must be showing on the label or contained in this monograph as appropriate:

- name of the component – *Buffy Coat*
- component code
- volume
- name of the Processing centre
- donation number*
- ABO group*
- Rh D group stated as positive or negative*
- date of collection
- date of expiry*
- name of the approved anticoagulant solution
- name of the additive solution
- additional component information : irradiated etc. if appropriate
- storage temperature

* eye readable and barcode format

In addition the following instructions are included:

- always check that the recipient for this component is properly identified
- do not use if there are signs of deterioration or other damage
- use a standard transfusion set
- the product carries a risk of adverse reaction / infection
- contact your blood bank for further information

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6. WARNINGS

Because of the possibility of severe adverse effects associated with the transfusion of granulocytes (recipient side-effects), the goals of granulocyte transfusion must be defined clearly before a course of therapy is initiated.

As there is a significant content of red blood cells, compatibility of donor red cells with the designated recipient must be verified by suitable pre-transfusion testing. RhD-negative female recipients of child-bearing potential must not be transfused with granulocyte concentrates from RhD-positive donors; if RhD-positive concentrates have to be used, the prevention of RhD immunisation by administration of anti-D immunoglobulin should be considered.

Caution is advised for patients with HLA antibodies.

CMV-seronegative components for CMV-seronegative recipients must be considered.

Administration through a micro-aggregate or leucocyte-reduction filter is contraindicated.

The risk of adverse reactions is increased with concomitant administration of Amphotericin B.

Adverse reactions include:

- non-haemolytic transfusion reaction (mainly chills, fever and urticaria);
- allo-immunisation against red cell antigens, HLA, HPA and HNA;
- transfusion-related acute lung injury (TRALI);
- post-transfusion purpura;
- viral transmission (hepatitis, HIV, etc.) is possible, despite careful donor selection and screening procedures;
- syphilis transmission;
- protozoal transmission (e.g. malaria, toxoplasmosis) may occur in rare instances;
- transmission of other pathogens that are not tested for or recognised
- citrate intoxication in neonates and in patients with impaired liver function.