Guidelines for the Blood Transfusion Services

7.7.6: Platelets for Intrauterine Transfusion, Leucocyte Depleted

http://aws-lon-jpac.targetservers.uk/red-book/chapter-7/7-7/7-7-6

7.7.6: Platelets for Intrauterine Transfusion, Leucocyte Depleted

A hyperconcentrated platelet component for intrauterine transfusion, prepared by apheresis, that contains less than 1×10^6 leucocytes per donation.

7.7.6.1: Technical information

- Section 7.7 provides general guidance on the requirements for components for intrauterine transfusion and use in neonates and infants under 1 year.
- The component should be free from clinically significant irregular blood group antibodies including high-titre anti-A and anti-B and should be negative for antibodies to CMV.
- The component must be used by the end of Day 1.
- The component must be irradiated. See the BSH ‘Guidelines on transfusion for fetuses, neonates and older children’.[6]
- The component should contain a concentration of platelets between 2 and 4×10^{12}/L in a collected volume generally in the range of 50-100 mL. The volume of suspension medium must be sufficient to maintain the pH at >=6.4 at the end of the shelf life of the component.
- All components should be quality monitored and achieve the specified requirements. The testing need not necessarily be performed before component release.
- Screening of female donors for HLA/HNA antibodies should be considered as a TRALI risk reduction strategy. If platelets are to be issued as HPA-matched (e.g. HPA-1a or HPA-5b negative) then donors should be screened and found negative for all clinically significant HLA and HPA antibodies (as defined in Chapters 16 and 18). This screening can be done on an initial sample and does not need repeating at each donation unless the donor has been transfused or pregnant since the last antibody screen.
- A record which demonstrates that the donor has not been transfused since the initial negative screen for antibodies and in case of female donors that the donor has not been pregnant since the initial negative screen for antibodies needs to be maintained.
- Platelets for Intrauterine Transfusion, Leucocyte Depleted should administered through a CE/UKCA /UKNI marked transfusion set.

7.7.6.2: Labelling

For general guidelines, see section 6.6.

The following shall be included on the label:

(* = in eye-readable and UKBTS approved barcode format)

- Platelets for Intrauterine Transfusion, Leucocyte Depleted* and volume
- the blood component producer's name*
- the donation number*
- the ABO group*
- the RhD group stated as positive or negative*
- the relevant HPA and HLA type, if necessary
- the date of collection
- the expiry date and time*
- the temperature of storage and a comment that continuous gentle agitation during storage is recommended
- the blood pack lot number*
- the name, composition and volume of the anticoagulant.

In addition, the following statements should be made:

INSTRUCTION
Always check patient/component compatibility/identity
Inspect pack and contents for signs of deterioration or damage
Risk of adverse reaction/infection, including vCJD

7.7.6.3: Storage

For general guidelines, see section 6.7.

- The component should be stored at a core temperature of 22 ±2°C for use up to the end of Day 1.

- The component should be gently and continuously agitated during storage.

7.7.6.4: Testing

In addition to the mandatory and other tests required for blood donations described in Chapter 9, and leucocyte counting (see sections 6.3 and 7.7.1), the component shall be free from clinically significant irregular blood group antibodies and high-titre anti-A and/or anti-B and antibodies to CMV. Furthermore, all components tested for the other parameters shown in Table 7.7.6 shall meet the specified values.

Table 7.7.6 Platelets for Intrauterine Transfusion, Leucocyte Depleted – additional tests

Parameter	Frequency of test	Specification
Volume [1]	Every component	Within locally defined range
Platelet concentration		$2 – 4 \times 10^{12}$/L
pH at end of shelf life [2]		>=6.4
Leucocyte count [3,4]	As per sections 6.3 and 7.1.1	$<1 \times 10^{6}$/unit
[1] Units measured and found to be <50 mL or >120 mL should only be issued for transfusion under concessionary release		
[2] The shelf life of this hyperconcentrated platelet component has been set to reflect validation data. Therefore, once this has been validated locally, there is no need to measure pH at expiry on a routine basis		
[3] Methods validated for counting low numbers of leucocytes must be used		
[4] Units measured and found to have $>=2.5 \times 10^{6}$/unit should only be issued for transfusion under concessionary release		

Note: Visual inspection of platelet components for the swirling phenomenon, clumping, excessive red cell contamination and abnormal volume is a useful pre-issue check.

7.7.6.5: Transportation

For general guidelines, see section 6.11.

- Containers for transporting platelets should be equilibrated at room temperature before use. During transportation the temperature of platelets must be kept as close as possible to the recommended storage temperature and, on receipt, unless intended for immediate therapeutic use, the component should be transferred to storage at a core temperature of 22°C with continuous gentle agitation.

- Plastic overwraps should be removed prior to storage.