



## Terms of Reference /Technical Specification Clauses

### Item Name: Butane-1,4-diol Cooling Plates (Cartridges) for WB Cooling

Procure reusable cooling cartridges containing 1,4-butanediol (phase-change material  $\sim 20^{\circ}\text{C}$ ) to rapidly cool freshly collected whole blood (WB) from  $\sim 37^{\circ}\text{C}$  to  $22 \pm 2^{\circ}\text{C}$  within  $\leq 2$  hours, and maintain  $20\text{--}24^{\circ}\text{C}$  until processing for platelet preparation.

#### I- Specifications:

- **Performance:**
  - Cool WB ( $450 \pm 50$  mL) to  $22 \pm 2^{\circ}\text{C}$  in  $\leq 2$  hours (full load).
  - Temperature spread  $\leq 2^{\circ}\text{C}$  between units; maintain  $20\text{--}24^{\circ}\text{C}$  for  $\geq 8$  hours (vendor to state validated duration).
  - Operate in ambient  $15\text{--}35^{\circ}\text{C}$ .
- **Preconditioning:**
  - Pre-cool at  $+2\text{--}8^{\circ}\text{C}$  until PCM solid; readiness indicator required.
- **Design & Safety:**
  - Leak-proof, corrosion-resistant, smooth/cleanable surfaces, resistant to disinfectants.
  - Unique ID; SDS provided; sealed to prevent PCM exposure.
- **Durability:**
  - State re-use cycle life and warranty ( $\geq 12$  months).

#### II- Training:

Vendor-led hands-on training for lab personnel

#### III- Documents to be delivered:

- Certificates (CE/ISO 13485 or 9001)
- Warranty,
- User and maintenance Manual
- performance/validation data
- Completed LRC BTS Supplier Qualification Form: The official form must be fully completed, signed, and stamped.

#### IV- Accessories required:

Any additional required accessory to be suggested and provided by the company.

#### V – Transport, installation, and setup

Assured by the company.