




Date: June 5, 2023  
 To: Directors of Clinical Laboratories  
 Directors of Transfusion Services  
 From: Chris Lough, M.D.  
 Vice President of Medical Services  
 Re: Low Volume Red Blood Cells

Due to ongoing issues with the blood supply nationwide, LifeSouth is implementing low volume red blood cells (RBCs) as an immediate measure to RBC availability. While low volume RBC components are termed “low volume”, they often originate from a blood collection only a few milliliters less than a standard RBC unit. Additionally, it has been shown that the in vivo red cell survival and safety of these low volume RBC units are equivalent to standard volume units. Low volume units may be used as regular packed RBC units in many clinical situations without any detrimental impact on patient care and may have benefit in certain populations where a lower volume is advantageous, such as pediatrics.

Low volume RBC products are produced from whole blood collections of 333 to 449 mL (standard units are 500 mL ± 50 mL). At LifeSouth, the vast majority of these products are within 10% of the standard collection volume. These low volume units are licensed by the FDA and included in the Circular of Information with an intended use identical to traditional RBCs. Research has demonstrated that these units do not have compromised red cell characteristics due to anticoagulant proportion variations when compared to traditional units and may actually have reduced susceptibility to RBC storage lesion.

Utilization of these units helps to maintain our community's RBC inventory and prevents unnecessary waste of donations due to discard of safe, transfusable products. Production of low volume RBCs has already begun. You may begin receiving these units as part of your standard orders in small quantities. Low volume RBC product codes and an example label are included below.


Product Code	ISBT 128 Product Description
E5124	RED BLOOD CELLS CP2D>AS3/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5242	RED BLOOD CELLS CP2D>AS3/XX/refg ResLeu:<5E6 LowVol:anticoag not adj
E5558	RED BLOOD CELLS CP2D/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5611	RED BLOOD CELLS CP2D/XX/refg ResLeu:<5E6 LowVol:anticoag not adj
E5122	RED BLOOD CELLS CPD>AS1/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5157	RED BLOOD CELLS CPD>AS1/XX/refg ResLeu:<5E6 LowVol:anticoag not adj
E5126	RED BLOOD CELLS CPD>AS5/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5244	RED BLOOD CELLS CPD>AS5/XX/refg ResLeu:<5E6 LowVol:anticoag not adj
E5252	RED BLOOD CELLS CPD/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5240	RED BLOOD CELLS CPD/XX/refg ResLeu:<5E6 LowVol:anticoag not adj
E5376	RED BLOOD CELLS CPDA-1/XX/refg Irradiated ResLeu:<5E6 LowVol:anticoag not adj
E5155	RED BLOOD CELLS CPDA-1/XX/refg ResLeu:<5E6 LowVol:anticoag not adj


  
**W1151 22 025107 SK**  
 LifeSouth Community Blood Centers, Inc.  
 Gainesville, FL 32607  
 FDA Registration Number 3003707120

**0**  
**Rh POSITIVE**

Properly identify intended recipient.  
 See circular of information for  
 indications, contraindications,  
 cautions, and methods of infusion.  
 This product may transmit infectious agents.  
 Rx only


**VOLUNTEER DONOR**

  
 E5157V00

  
 0230692359

Expiration  
 Date  
**10 MAR 2023**

**RED BLOOD CELLS**  
**ADENINE-SALINE (AS-1) ADDED**  
**LEUKOCYTES REDUCED**  
**LOW VOLUME**  
 Approx \_\_\_\_\_ mL from \_\_\_\_\_ mL Whole  
 Blood containing approx \_\_\_\_\_ mL CPD  
 Store at 1 to 6 C

  
 N0008  
**Negative for antibodies to CMV**

W115122025107K 02

Pertinent references are listed below, including a current use case from a trauma center in the U.S. If you have any questions or would like additional information, please feel free to contact me directly at [cmlough@lifesouth.org](mailto:cmlough@lifesouth.org) or 352-224-1644.

#### References

1. AuBuchon, J. Implications of transfusion of “under-collected” units. *Transfusion* 1985; 25:291–292.
2. Button, LN et al. The Quality of Over- and Undercollected Blood for Transfusion. *Transfusion* 1976; 16: 148–154.
3. Davey, R. et al. Adequate survival of red cells from units “undercollected” in CPDA-1; *Transfusion* 1984; 24: 319–322.
4. Fadeyi, E et al. The use of low volume RBC units for transfusion. *Transfusion* 2022; 62:1148-1149.
5. Wen-Biao, L et al. Erythrocyte Concentrates Recovered from Under-Collected Whole Blood: Experimental and Clinical Results. *PLOS ONE* 2015; 10(2): e0117928.