South Texas Blood & Tissue

A SUBSIDIARY OF BIOBRIDGE GLOBAL

Saving O pRBCs from Low Titer Whole Blood Units Previously Discarded for High Titer Results or Long Draws (draws 16-20 minutes)

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Background/Case Studies

Our medium sized blood center collects low titer O whole blood (LTOWB) from a dedicated donor base for prehospital transfusion. Our program defines "low titer" as <1:256 IgM Anti-A and Anti-B antibodies and donors are tested on an annual basis. Historically, our program discarded any whole blood from a donor testing as high titer or any donor with a long draw (draws 16-20 minutes). Data analysis showed our center discarded 148 whole blood in 2025 due to high titer test results or long draws. Our center developed a process to save the O positive pRBC from these high titer or long draw units for transfusion.



Study Design/Methods

Manufacturing and low titer testing data was pulled from our blood establishment computer system.

Results/Findings

High titer whole bloods and long draws were spun down on a hardspin program, followed by manual separation to remove the pRBC from the whole blood. The remaining plasma was labeled as recovered plasma. The pRBC was hung above the final (CPDA-1;35 day shelf life) transfer bag and underwent leukoreduction. Since 03/30/2026, our center has further manufactured 83 number of low titer whole bloods (37 for high titer, 46 for long draws). All have passed Qc and were labeled as leukoreduced CPDA-1 pRBCs. One whole blood was discarded due to clot/filter failure.



Conclusions

Our center has successfully developed a process to further manufacture whole blood units that would have previously been discarded for high titer results or long draw status. This further processing has led to 42 O positive pRBC over a 2-month period along with the concomitant recovered plasma.