tested LR-PC units have a platelets recovery rate of more than 85% and a residual WBC count of less than 8.3X105 WBC/unit or 5X106 WBC/pool of six units.

LB.48.3 Requirements for PC preparation, storage, transport and expiration apply.

Standard Intent:

Units with lower leukocyte concentrations are associated with decreased febrile transfusion reactions, reduced alloimmunization potential, reduced cytomegalovirus transmission, and other benefits.

LB.49 The blood bank and transfusion services develop policies and procedures to ensure that the prepared and/or transfused irradiated cellular blood products are handled in an appropriate manner.

LB.49.1 Policies and procedures ensure that irradiated cellular blood products are prepared by a method known to ensure that irradiation has occurred at each time of use.

LB.49.2 Policies and procedures ensure that the preparation method used is known to deliver a minimum of 25 GY to the central part of the canister and a minimum of 15 GY at any point. Verification of dose delivered must be performed and evaluated annually.

LB.49.3 Policies and procedures ensure that irradiated RBC components assigned an expiration date not exceeding twenty-eight days from the date of irradiation or the original assigned expiration date (whichever occurs first).

LB.49.4 Policies and procedures ensure that irradiated platelet components retain their original expiration date.

Standard Intent:

Cellular blood components must be irradiated for the prevention of graft-vs-host disease (GVHD). Irradiation of RBCs followed by storage does result in some decrease in percentage of recovery after transfusion. In addition, an increased efflux of potassium from red cells causes the potassium levels to rise approximately twofold compared to non-irradiated units. Platelets are not damaged by an irradiation dose as high as 5000 cGy. Blood irradiators should be validated by measuring the amount of radiation delivered by machine upon installation and after mechanical maintenance, especially those involving the specimen handling apparatus such as the turntable. There should be periodic documentation (annually for Cesium-137 and semi-annually for Cobalt-60) that the procedure delivers a minimum of 2500 cGy targeted to the midplane of the canister if a free-standing irradiator is used, or to the central midplane of an irradiation field if a radiotherapy instrument is used. The minimum dose at any point in the canister or irradiation field should be 1500 cGy. The procedure should define the maximum number of units of blood or blood components that can be irradiated in a batch. There should be a quality control program for the indicator system in use.