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KEY WORD : PLATELET CONCENTRATE/STORAGE 22±2°C/HORIZONTAL

KAYSORN WITONVARAKORN : EVALUATION OF PLATELET CONCENTRATE STORED AT 22±2°C. IN HORIZONTAL AGITATOR. THESIS ADVISOR : SASITORN BEJRACHANDRA,M.D., NISARAT OPARTKIATTIKUL, MD.,Ph.D., 82 P.ISBN 974-589-204-1

For the second generation container, there are several kinds of bags. PL 732 bag is claimed to be the best and the most expensive among all. The aim of this study is to compare the quality of platelet concentrate (PC) stored in PL 1240 bag, a kind of second generation bag, with PC stored in the more expensive PL 732.

Both group PCs (n = 22 each) were stored at 22±2°C on horizontal agitator for 5 days. The quality of the PCs was assessed by measuring blood cell numbers, mean platelet volume (MPV), pH, pO₂, pCO₂, platelet aggregation response, Lactate dehydrogenase (LDH) and β-thromboglobulin level. The comparison was performed between the two groups at day 0, day 3 and day 5 of storage. In addition, the comparison within the group between day 0 vs day 3 and day 3 vs day 5 were also analysed.

The results indicated that the quality of the PCs stored in PL 1240 bags was not significantly different from the PCs stored in PL 732 bags except for the platelet number, pO₂, pCO₂ value and LDH level. However, the differences might not have clinical meaning and the other parameters especially the aggregation response of PCs of the two types bags were similar. This suggested that PL 1240 bag could be used for storage of PC with satisfactory results and less expense.