

# 16<sup>th</sup> World Hematology Congress

March 18-19, 2019 | Rome, Italy

## Technology and quality improvement in blood components preparation

Nuanchan Mongkhunkhamchaw, Thipaporn Jaroonsirimaneekul, Jongkol Akahat and Kutcharin Phunikhom  
Khon Kaen University, Thailand

**Background & Objective:** The automated blood processing system has been developed for whole blood units semi-automated, the machine was developed to separate blood components and improves the accuracy. The aim of this study was evaluate the product specifications and quality of components produced after the semi-automated system.

**Materials & Methods:** Whole blood was processed using the semi-automated system and compared and validated. Leukodepletion of blood product and packed red cells was compared between two protocols. Platelet pooled units were compared the value of volume, hematocrit, platelet contents and white blood cell contamination of LDPRC and LDPC by SPSS statistics.

**Results:** 408 samples of whole blood were processed with reveos system. Average of fresh frozen plasma, interim platelet and leuko packed were 217.52, 62.40 and 10.2 mL, respectively. The platelet index was more than 60 cells/u is 75.8%. The quality of LDPRC; hematocrit equals to 55.8%, volume equals to 313 mL and white cell contamination equal  $0.0 \times 10^6$  cells/u. SPSS statistics were found that the hematocrit, volume and white blood cell contamination were not different ( $P > 0.01$ ,  $P > 0.05$  and  $P > 0.05$ , respectively). The quality of LDPC (N=68); platelet contents equal  $3.03 \times 10^{11}$  cells/u, volume equal 255.8 mL and white cell contamination equal  $0.0 \times 10^6$  cells/u. All values may not differ statistically ( $P > 0.05$ ). PRC from two protocols are statistically significant and they are accepted hematocrit between 65-80%.

**Conclusions:** The automated and semi-automated system LDPRC, LDPC and PRC reached the recommended quality of Council of Europe (EU), American Association of Blood Banks (AABB), National Blood Centre and Thai Red Cross Society (TRC).

## Biography

Nuanchan Mongkhunkhamchaw is working in Khon Kaen University, Thailand.

snuanc@kku.ac.th

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