ABSTRAK

Tuberculosis (TB) disebabkan oleh mikroorganisme *Mycrobacterium tuberculosis* (MTB) pada organ paru. Bakteri ini biasanya ditularkan melaui cairan droplet penderita yang terhirup oleh calon penderita memalui saluran pernafasan. NaCl 0,9% merupakan *Gold standart* dalam pemeriksaan Laju Endap Darah (LED) yang direkomendasikan oleh *International Commite for Standarization in Hematology* (ICSH), ditemukan bahwa *Phosphate Buffer Saline* (PBS) memiliki tekanan osmolaritas yang sama dengan cairan tubuh, dan bersifat isotonis sehingga mirip dengan NaCl 0,9%. Penelitian ini bertujuan untuk menentukan perbedaan hasil LED menggunakan pengencer PBS pH 7,2 dan pH 7,4 pada pasien *Tuberculosis.* Penelitian ini menggunakan metode *eksperimen,* dengan desain penelitian *static group comparation design* terhadap perbedaan hasil LED menggunakan NaCl 0,9% sebagai kelompok kontrol dan PBS pH 7,2 serta pH 7,4 sebagai kelompok perlakuan. Hasil uji statistic menunjukkan nilai rerata LED menggunakan NaCl 0,9% yaitu 78,30 mm/jam, PBS pH 7,2 78,70 mm/jam dan PBS pH 7,4 79,50 mm/jam. Berdasarkan hasil uji *One Way Anova* didapatkan *p-value* yakni 0,997. Kesimpulan dari penelitian ini bahwa hasil pemeriksaan LED menggunakan larutan pengencer PBS pH 7,2 dan pH 7,4 tidak terdapat perbedaan hasil dengan kelompok kontrol (NaCl 0,9%).

Kata kunci: *Tuberculosis*, NaCl 0,9%, *Phosphate Buffer Saline*, Laju Endap Darah

ABSTRACT

Tuberculosis (TB) is caused by the microorganism Mycobacterium tuberculosis (MTB) in the lungs. This bacteria is usually transmitted through infected dropleEritrositare inhaled by potential sufferers through the respiratory tract. NaCl 0.9% is the gold standard in Eritrosit Sedimentation Rate (ESR) examination recommended by the International Committee for Standardization in Hematology (ICSH), it was found that Phosphate Buffer Saline (PBS) has the same osmolarity pressure as body fluids, and is isotonic so it is similar to NaCl 0, 9%. This study aims to determine the difference in ESR results using PBS diluent pH 7.2 and pH 7.4 in Tuberculosis patients. This research used an experimental method, with a static group comparison design for differences in ESR results using 0.9% NaCl as the control group and PBS pH 7.2 and pH 7.4 as the treatment group. The statistical test results show that the average value of LED using 0.9% NaCl is 78.30 mm/hour, PBS pH 7.2 - 78.70 mm/hour and PBS pH 7.4 - 79.50 mm/hour. Based on the results of the One Way Anova test, the p-value was 0.997. The conclusion of this study is that the results of the ESR examination using PBS diluent solution pH 7.2 and pH 7.4 showed no difference in results with the control group (NaCl 0.9%).

Keywords*: Tuberculosis, NaCl 0.9%, Phosphate Buffer Saline, Eritrosit Sedimentation Rate.*