

ABSTRAK

Pemeriksaan hitung jumlah leukosit dan trombosit dengan cara otomatis dapat dilakukan dengan dua metode yaitu metode *impedance* dan metode *flowcytometry* dengan prinsip yang berbeda. Metode *Impedance* mengukur jumlah leukosit dan trombosit berdasarkan dari ukuran sel. Sedangkan, Metode *Flowcytometry* mengukur jumlah leukosit dan trombosit dengan menembakkan sinar laser ke setiap sel yang melewati celah. Bentuk dan ukuran sel dibaca dari hasil peredaran cahaya yang dihasilkan. Penelitian ini bertujuan untuk mengetahui apakah ada perbedaan hasil jumlah leukosit dan trombosit menggunakan Alat *Hematology Analyzer* Metode *Impedance* dan Metode *Flowcytometry*. Jenis penelitian ini adalah penelitian observasi analitik dengan rancangan penelitian *cross sectional* yaitu subyek penelitiannya hanya diobservasi pada satu titik tertentu. Pengambilan sampel dilakukan dengan teknik *random sampling*. Penelitian dilakukan di Laboratorium RS Royal Surabaya dan UPTD Labkesda Surabaya dari bulan Oktober 2022 sampai bulan April 2023 dengan 34 responden. Uji statistik *wilcoxon* menunjukkan ada perbedaan hasil jumlah leukosit dan trombosit antara metode *impedance* dan metode *flowcytometry*.

Kata Kunci : Leukosit, Trombosit, Metode *Impedance*, dan Metode *Flowcytometry*.

ABSTRACT

Examination of leukocyte and platelet counts in an automated way can be carried out with two methods, namely the impedance method and the flow cytometry method with different principles. The Impedance method measures the number of leukocytes and platelets based on cell size. Meanwhile, the Flowcytometry method measures the number of leukocytes and platelets by shooting a laser beam at each cell that passes through the gap. The shape and size of the cell is read from the circulation of the light produced. This study aims to determine whether there are differences in the results of the number of leukocytes and platelets using a Hematology Analyzer Tool Impedance Method and Flowcytometry Method. This type of research is an analytic observation research with a cross-sectional research design, where the research subjects are only observed at one particular point. Sampling was done by random sampling technique. The research was conducted at the Royal Surabaya Hospital Laboratory and UPTD Labkesda Surabaya from October 2022 to April 2023 with 34 respondents. The Wilcoxon statistical test showed that there were differences in the results of the leukocyte and platelet counts between the impedance method and the flowcytometry method.

Keywords : Leukocytes, Thrombocyte, *Impedance* Method and *Flowcytometry* Method.