ABSTRACT

One way in determining the type of disease is by counting the number of cell. Cell counting is done by determining the number of cells that are in the blood, which each have functions and different levels depending on age and sex. This test not only be done on blood alone, but can also use the urine. The content contained in urine is not much different from the blood, including white blood cells (leukocytes), red blood cells (erythocytes), bacteria, epithelia, granules, crystals and other substances (fat, etc.).

Technological developments also occurred in the medical field, the more technology needed to facilitate the implementation of medical activities. In this final project will be done on digtal image processing application to assist cells counting of leukocytes, so will get automatic cells count that can help paramedics.

Leukocyte in the urine, which is analyzed is the core (nucleus) and cell size. The process starts from the pre-image processing image processing, multilevel threshold,until the image is ready to be counted. The number of leukocytes obtained will determine the type of UTI (Urinary Tract Infection). For counting accuration is 60.26% and type 90.7% for the determination of the type of UTI.

Keywords: Citra Processing, threshold, leukocyte, ISK