

## ABSTRACT

Blood Cell Analyse represent one of diagnosis technique which is important for health world, either to detect disorder of the body or to diagnosis medication of disease. Analyze was done by using blood cell image in 2 dimension which is taken away by microscope.

One of them is blood cell counting where there are standard for the number of blood cell that indicate the condition of human's body. Standard of the number of blood cell depend on some factor, that are gender, age, and others So That, blood cell counting become one of method to detect certain disease type with symptom which almost look like with other disease.

Digital Image Processing development, enabling to obtain blood cell counting automatically. In this final project, designed a system to count the number of blood cell automatically, so that be expected a time efficiency that is usually needed for manual counting can be done.

Input Used in the form of 2 dimension blood cell image which is taken from microscope or sampel of scan result that joined with noise. Therefore, be needed image enhacement with contrast stretching and filtering so that be got with better quality image to get more accurate counting result. For image segmentation, used adaptive thresholding method, that is determination threshold's value by considering optimum threshold from each sub-image, so that be got different values threshold at one citra according to condition of each sub-image. This method earn to overcome hazy boundary cell at image even the cell which squeez by clarifying boundary usher cell. So That, cell which within call even squeez can be separate and the cell counting more accurate compared to use global threshold.

**Keywords:** blood cell image, digital image processing, *adaptive thresholding*, red blood cell counting.