Abstract

Blood cell analysis is a critical step in the process of disease analysis. Blood analysis process, usually done manually, has been automated to overcome the cumbersome task of RBC identification, segmentation, and classification. The digital image processing techniques developed in the past few years has made the automation possible. Among all the levels of medical imaging of the blood cells, the segmentation of the blood cell is the most vital task. This paper attempts to develop a new technique to segment an RBC from blood smear images. The proposed method is implemented by extracting a color image from the light microscopic smear image. A green channel is extracted from the color image. Further, image filtering is used to remove noise from the captured image. Finally Red Blood Cell segmentation is implemented using discrete shearlet transform. The proposed method is tested on blood cell images.

Index Terms

Computer Science  Image Processing
Keywords

Discrete Shearlet transform, median filtering, Red Blood Cell, Image Segmentation and Smear Image are the keywords used in the paper.