Comparative Study of HSV Color Model and Ycbcr Color Model to Detect Nucleus of White Cells

Abstract

Main objective of this paper is to extract nucleus of white cells using image processing techniques. Here, nucleus of white cells are extracted from images using HSV color space and YCbCr color space. Using both of method, comparison between two methods has been checked. It has been proved that YCbCr is better than HSV color model by some experiment. Here, experiment is done on 15 images. HSV color model is given accurate result only on 5 images out of 15 and YCbCr color is given accurate result only on 13 images out of 15. So accuracy of HSV and YCbCr model is 33.34% and 86.67% respectively. Here, white cell nucleus detection is useful to detect, blood cancer or Leukemia. It reduce processing time of pathologist and give result in short period of time.

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Keywords

Nucleus of white cell detection, HSV color model, YCbCr color model, image processing