CHAPTER 7

RESULTS

Different types of images have been analyzed for textural defects and the defect detection efficiency in % for various methods are shown in Figure 7.1

![Defect Detection Efficiency Graph](image)

**Figure 7.1 Methods Vs Defect Detection Efficiency in %**

M1—Edge detection  M2-Filtering  M3—Mask  M4—Texture Spectrum  M5—Fractal Geometry  M6—Advanced Texture Spectrum  M7--FCM  M8—Neural Networks with texture features.
DR images have been analyzed to detect whether exudates or present or not. If any defects are detected, the various parameters are calculated to find out to what extent the eye has been affected with the disease. So, many test images have been analyzed and the results are compared with the medical reports. To investigate the effectiveness of the proposal method, an image dataset of 200 labeled retinal images including 100 normal and 100 abnormal images is considered. To evaluate the efficiency of the proposed region-level classification scheme, FCM - based segmentation, feature selection and NN based classification, the image dataset is used. And also, 500 images are used to validate the effectiveness of exudates recognition approach and two images have been used as running example to illustrate each stage of the method. The performance of the system has been evaluated using the image dataset. Robustness and accuracy in comparison to expert ophthalmologists have been evaluated on a large image dataset. The high performance of the proposed method is in part enabled by the integration of several efficient computational intelligent - based methods.

Similarly, liver images, knee images, radiographic images and soil images have been analyzed using several images and the defect detection efficiency has been calculated.

Thus defects in textures are analyzed and detected efficiently by using various image processing algorithms. In each and every case 100 images have been analyzed and the results are found to be satisfactory. Neural networks using Textural features are found to be efficient in analyzing the defects since the processing time is minimum, computational efficiency is high and the defect detection efficiency is 95%.