

## **ABSTRACT**

*Periapical abscess is a chronic aveloar peradikular bone infection that lasted for a long time and low-rise, and the source of infection present in the root canal. The cause of it is the death of the pulp with the expansion process next periapical infection, or it can also be caused by acute abscess that previously existed.*

*Periapical abscess disease is very difficult to be seen by naked eye, to diagnose the disease, it takes some physical testing using peripikal radiograph to ensure there is decay around the teeth needed specialists in the field of radiology to determine the diagnosis. In Indonesia, specialist in the field of radiology is still very little. Therefore, the author aims to make research using digital image processing techniques aim to facilitate in diagnosing abscesses.*

*SVD (Singular Value Decomposition) method is a matrix process into 3 matrix components, namely the hanger, stretcher and aligner. This application generates an accuracy rate of 90%. With the application of image processing for detecting abscess radiographs can help the dentist as an additional diagnosis in determining measures for the disease.*

*Keywords : abscess periapical, radiograph periapical, singular value decompotition.*