

## Comparing between the power of CCD and PSP digital intraoral receptors in detection of secondary proximal caries in permanent premolar teeth (In Vitro)

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### Abstract

**Background and Aim:** Considering the importance of detecting the secondary proximal caries and known effects of false positive and false negative diagnosis and regarding the lack of information about this issue, the purpose of this study was to compare the ability of CCD and PSP sensor in detection of secondary proximal caries in permanent premolar teeth with the gold standard method.

**Materials and Methods:** In this diagnostic study, 40 normal extracted premolar teeth were used. Class I cavities were prepared and filled with amalgam and digital radiographs were taken. Then, the secondary caries were made artificially by acid solution and digital images were obtained with the above condition. Evaluation of all radiographs was performed by 5 observers. Detections were performed and results were analyzed with statistical tests.

**Result:** The unacceptable detection for CCD was 30% and for PSP was 37.5%. This difference was not statistically significant ( $p < 0.4$ ).

**Conclusion:** There is no superior for the clinical use of CCD and PSP receptors in detection of proximal caries in permanent premolars.

**Keywords:** Dental digital radiography, Diagnosis, Dental Caries