

## Poster journal

# SEM Study of the Marginal Adaptation of BIODENTINE™ – A Ca<sub>3</sub>SiO<sub>5</sub>-based Dentin Substitute and Mineral Trioxide Aggregate

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### Abstract

**Introduction:** The use of a biocompatible substance that prevents the egress of potential contaminants into the periapical tissues is critical because of which apical seal is considered to be an important factor for successful periradicular surgery.

**Aim:** To compare the marginal adaptation of two root – end filling materials (BIODENTINE™ and Mineral Trioxide Aggregate), using scanning electron microscopy.

**Materials and Method:** Twenty single rooted extracted human teeth were used. The canals were instrumented and obturated with gutta percha. Following root end resection and cavity preparation, root end cavities were filled with BIODENTINE™ and Mineral trioxide aggregate. Using a chisel and mallet, roots were longitudinally split into two halves. Under scanning electron microscope, the gaps between the material and dentinal walls were observed. The gaps at the BIODENTINE™ to dentin and MTA to dentin will be analysed using SEM.

**Keywords:** Biodentine, Root end filling material, MTA, Apical Seal, Tricalcium Silicate, SEM.

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