

1. [Sealing ability of Hybrid Root SEAL \(MetaSEAL\) in conjunction with ...](http://www.ncbi.nlm.nih.gov/pubmed/20451827)  
[www.ncbi.nlm.nih.gov/pubmed/20451827](http://www.ncbi.nlm.nih.gov/pubmed/20451827)

di H Ari - 2010 - [Citato da 6](#) - [Articoli correlati](#)

OBJECTIVE: The objective of this study was to evaluate the apical sealing ability of Hybrid Root SEAL (**MetaSEAL**) in conjunction with different obturation

The screenshot displays a web browser window showing a PubMed article. The browser's address bar contains the URL <http://www.ncbi.nlm.nih.gov/pubmed/20451827>. The page header includes the NCBI logo and navigation links like 'Resources' and 'How To'. The main content area features the article title, authors, and abstract. The abstract text is as follows:

**OBJECTIVE:** The objective of this study was to evaluate the apical sealing ability of Hybrid Root SEAL (MetaSEAL) in conjunction with different obturation techniques.

**METHODOLOGY:** Sixty-eight extracted human mandibular straight single-rooted teeth with mature apices were prepared using a step-back technique and divided into 4 experimental groups (n = 15). An additional 8 teeth were prepared for controls (3 for positive, 3 for negative control, and 2 more for calculating 100% leakage). The experimental groups were obturated with Hybrid Root SEAL (MetaSEAL) using cold lateral condensation, vertical condensation, Thermafil, and Ultrafil techniques. Fluid movement along the filled canals was measured using a fluid filtration method. Measurements were made at 2-minute intervals for 8 minutes. The data were calculated as microL/min and statistically analyzed using 1-way ANOVA and Duncan Test.

**RESULTS:** Cold lateral and vertical condensation had significantly less fluid movement than the Thermafil and Ultrafil groups. Thermafil group had the highest fluid movement values when compared with the other groups (P < .01).

**CONCLUSION:** Hybrid Root SEAL (MetaSEAL) had less fluid movement with cold lateral and vertical condensation techniques when compared with Thermafil and Ultrafil techniques.

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PMID: 20451827 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms, Substances

The right sidebar contains a 'Send to' section with an 'ELSEVIER FULL-TEXT ARTICLE' link, a 'Save items' section with an 'Add to Favorites' button, and a 'Related citations in PubMed' section listing several related articles.

# 1. [Hybrid Root SEAL \(MetaSEAL\) creates hybrid layers in radicular ...](http://www.ncbi.nlm.nih.gov/pubmed/20225474)

[www.ncbi.nlm.nih.gov/pubmed/20225474](http://www.ncbi.nlm.nih.gov/pubmed/20225474)

di L Pinna - 2009 - Citato da 10 - Articoli correlati

PURPOSE: To test if the hybrid layer formation by Hybrid Root SEAL (Sun Medical Co.), a 4-META-containing auto-adhesive self-etching root canal sealer

The screenshot shows a web browser window with the following content:

- Browser Address Bar:** <http://www.ncbi.nlm.nih.gov/pubmed/20225474>
- Page Header:** NCBI Resources | How To | Sign in to NCBI
- Search Bar:** PubMed | Search
- Display Settings:** Abstract
- Title:** Hybrid Root SEAL (MetaSEAL) creates hybrid layers in radicular dentin only when EDTA is used as the final rinse.
- Authors:** Pinna L<sup>1</sup>, Loushine RJ, Bishop FD Jr, Cotti E, Weller RN, Pashley DH, Tay FR.
- Author information:** (Collapsible section)
- Abstract:**

**PURPOSE:** To test if the hybrid layer formation by Hybrid Root SEAL (Sun Medical Co.), a 4-META-containing auto-adhesive self-etching root canal sealer, is affected by the sequence of irrigants employed for removing canal wall smear layers during root canal treatment.

**METHODS:** Single-rooted teeth were shaped and irrigated with EDTA as initial rinse/NaOCl as active final rinse (Group 1), or NaOCl as initial rinse/EDTA as active final rinse (Group 2). All canals were obturated with Hybrid Root SEAL using a single-cone technique. Root slices derived from the coronal, middle and apical thirds of the roots were processed for transmission electron microscopy after removing the gutta-percha, leaving the sealer intact. Additional filled canals from the two groups were evaluated for fluid leakage.

**RESULTS:** Hybrid layer was absent in Group 1 and was present only when a collagen matrix was produced by EDTA demineralization (Group 2). Significantly more leakage (4.03 +/- 1.94 microL min(-1) vs. 1.50 +/- 0.42 microL min(-1); P < 0.05) was observed in the absence of dentin hybridization.
- PMID:** 20225474 [PubMed - indexed for MEDLINE]
- Publication Types, MeSH Terms, Substances:** (Collapsible section)
- LinkOut - more resources:** (Collapsible section)
- Related citations in PubMed:**
  - Effect of Er,Cr:YSGG laser irradiation on the a [Oral Surg Oral Med Oral Pathol Oral Radiol ...]
  - Effectiveness of different final irrigant activation protocols on smear layer removal [J Endod. 2010]
  - Application of biologically-oriented dentin bonding principles to the use of endodoi [Am J Dent. 2005]
  - Review** [Should the dentin smear layer be preserved or ...] [Rev Belge Med Dent (1984). 2000]
  - Review** Critical appraisal of published smear la [Oral Surg Oral Med Oral Pathol Oral Radiol ...]
- Cited by 1 PubMed Central article:**
  - The effect of different irrigation protocols for smear layer removal on bonc [Iran Endod J. 2013]

Publications and oral/poster presentations at academic/scientific meetings regarding Hybrid Root SEAL are listed in the reverse chronological order.

- Chemical surface analyses of a 4-META-containing methacrylate resin-based sealer
- Effect of calcium hydroxide on bondability of adhesive sealers
- Effect of aging on bondability of a 4-META-containing methacrylate-based sealer
- Influence of powder/liquid ratio on bondability of a methacrylate-based sealer
- Push-out testing and SEM evaluation of adhesive root canal sealers
- SEM evaluation of roots obturated with adhesive root canal sealers
- Interface analysis of an adhesive sealer and root canal dentin
- Evaluation by SEM observation of newly root canal sealer
- Evaluation by SEM observation of root canal sealer
- Evaluation of MTBS of newly root canal sealer