BJM Root Canal Sealer™

TWO-PASTE EPOXY-AMINE RESIN ROOT CANAL SEALER

IABT incorporation into dental polymers prevents bacterial growth and biofilm formation.

Indications

- Obturation of root canals together with gutta-percha points.

Properties

- Extremely high radiopacity.
- Excellent wettability and flow properties.
- Outstanding sealing ability.
- IABT Antibacterial technology.
- Non-cytotoxic.
- Long-term stability.
- Moderate flexibility that prevents cracking of fully cured material.
- Low shrinkage.
- Automix Syringe - Saves application time; guarantees consistent mix.

Scientific Papers

1. Antibacterial mechanism of novel endodontic sealer, D. Kesler Shvero, N. Zaltsman, E. Weiss, N. Beyth, Hadassah School of Dental Medicine, Hebrew University, IADR Israeli Division Meeting, Tel-Aviv, June 2013.
2. Root canal sealers as Biofilm prevention: facts and speculations, M. Solomonov, Эндодонтия, Том VII, No. 1-2, 2014.
3. Antibiofilm Activity of Epoxy Sealer with Quaternary Ammonium Macromolecule, T. Becker, M. Solomonov, N. Sterer, R. Bar-Ness, A. Levin, A. Shemesh, The Maurice and Gabriela Goldschleger School of Dental Medicine Tel Aviv University, Program Number 0219, PER-IADR Congress, Jerusalem, Israel, 2016.
4. Dr. Michael Solomonov, Clinical Cases Report, March 2017.
5. Evaluating the physical properties of one novel and two well-established epoxy resin-based root canal sealers, M. Solomonov, J.B. Itzhak, Quintessence Publishing Endo 2017; 11 (4): 285-290.
6. Antibiofilm activity of epoxy sealer incorporated with quaternary ammonium macromolecule, T. Becker, N. Sterer, R. Bar-Ness, T. Toledano and M. Solomonov Evidence-Based Endodontics 2019; 4 (1): 1-6.
7. Dr. Gabriel Kaplan, Clinical Cases Report, March 2019.

Technical Data

BJM RCS will set within 48 hours at 37°C	
Shelf Life	2 Years

Packaging & Order Information

- **Item # 400200**

- 1 Automix Syringe 5ml of BJM RCS
- 10 Automix Syringe Mix Tips and Intraoral Tips
- 1 Mixing Pad

BJM LAB

IADR/PER 2019 CONGRESS
SEPTEMBER 20-22, 2016 ▲ JERUSALEM, ISRAEL

Session Title: 0219

Antibiofilm Activity of Epoxy Sealer With Quaternary Ammonium Macromolecule

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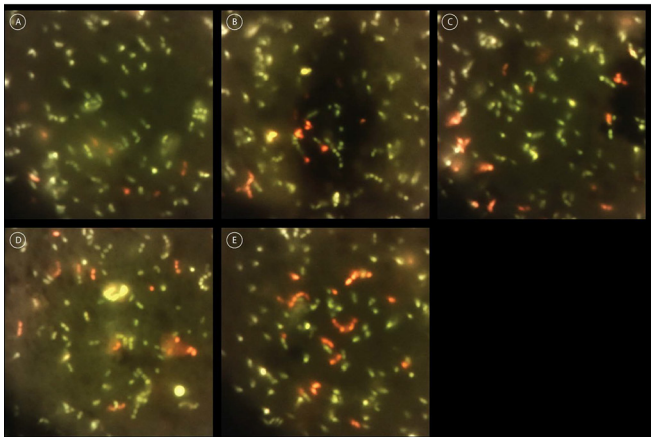
Abstract:

Objectives: This study evaluated the in vitro antibacterial effect of Epoxy sealer, **BJM ROOT CANAL SEALER®** (BJM Laboratories Ltd., Or-Yehuda, Israel), incorporated with quaternary Ammonium macromolecule (BIOSAFE HM4100, BIOSAFE Inc., Pittsburg, PA, USA) against existing biofilm of *Enterococcus faecalis* and its ability to inhibit de-novo biofilm formation of *Enterococcus faecalis*.

Methods: Six mm diameter discs (3mm thickness) of epoxy sealer (BJM) incorporated with various concentrations of immobilized Ammonium particles (0.4, 0.8, 1.6, and 3.3% w/v) or without any addition (as control), were prepared. Antibacterial effect of the above discs on de-novo biofilm formation (*E. faecalis*) was tested by Biofilm Formation assay. Antibacterial effect of the discs on existing biofilm was tested by Biofilm Viability assay: The Live/Dead bacterial ratio was determined using fluorescence microscopy.

Results: Biofilm Formation assay showed significant reduc-tions in de-novo biofilm formation of 25 and 72% in the higher Ammonium particle concentrations of 1.6 and 3.3% w/v respectively ($p<0.001$ for both). Biofilm Viability assay showed significant reductions in existing biofilm viability of 20 and 36% in the higher Ammonium particle concentrations of 1.6 and 3.3% w/v respectively ($p<0.001$ for both).



Fluorescence microscopy images of live (green) and dead (red-orange) bacteria in various concentrations of quaternary ammonium incorporated epoxy discs: (A) Control group (0%). (B) 0.4% w/v. (C) 0.8% w/v. (D) 1.6% w/v. (E) 3.3% w/v.

Conclusions: Quaternary Ammonium macromolecule incorporated in epoxy root canal sealer discs showed a pronounced reduction of de-novo biofilm formation in the higher concentrations (1.6 and 3.3% w/v), as well as some antibacterial effect against existing biofilm of *E. faecalis*. This may be effective for prevention of de-novo formation of bacterial biofilm in treated root canals.

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