

# Bio-C<sup>®</sup> Sealer

Bioceramic root canal sealer ready to use





# More than biocompatible!

## BIO-C® SEALER

Bioceramic root canal sealer ready to use.



Merely illustrative images.

### INDICATIONS

- Filling of root canals;
- Treatment of non-communicating internal.

### Definition

BIO-C® SEALER is a ready-to-use bioceramic filling cement. It presents a great advantage over traditional cements: it is easy to use as it **does not require mixing** and, consequently, prevents incorrect proportioning. The direct application to the root canal through an applicator tip syringe simplifies its use and provides great professional time-savings.

Besides its ease of use, it presents all the benefits of a bioceramic formulation: formation of mineralized tissue that **induces tissue regeneration** by the release of  $\text{Ca}^{2+}$  ions, bactericidal action by the release of  $\text{OH}^-$  raising pH and **inhibition of bacterial infiltration** by its high flow, setting expansion and chemical adhesion to dentin. As a result, **safety and high rates of success in endodontic treatment** are obtained.



Ready to use/  
putty



High release of calcium ions



Bactericidal

# 3

## Reasons to use BIO-C<sup>®</sup> SEALER

### 1

#### **Ready to Use**

No mixing required.  
Apply directly to canal.

### 2

#### **Non resinous**

Easy to clean.

### 3

#### **High release of calcium ions**

Stimulates tissue regeneration.

# Endodontic Success!

## Composition

| COMPONENT                              | FUNCTION                                                |
|----------------------------------------|---------------------------------------------------------|
| Tricalcium Silicate (C <sub>3</sub> S) | Mechanical resistance over time<br>Calcium ions release |
| Dicalcium Silicate (C <sub>2</sub> S)  | Mechanical resistance over time<br>Calcium ions release |
| Tricalcium Aluminate                   | Initial setting                                         |
| Calcium Oxide                          | Calcium ions release                                    |
| Zirconium Oxide                        | Radiopacity                                             |
| Silicon Oxide                          | Rheology agent                                          |
| Polyethylene Glycol                    | Dispersing agent                                        |
| Iron Oxide                             | Pigmentation                                            |

BIO-C® SEALER is a NON-RESINOUS cement that, in addition to its improved biocompatibility properties, also provides an easy pulp chamber cleaning after endodontic obturation.

**EUGENOL FREE:** BIO-C® SEALER is free of Eugenol and therefore has lower cytotoxicity, does not cause staining and does not interfere with the polymerization of resinous materials (resin cements and composite resins).

## Key Features and Benefits

### Flow

High flow allowing the filling of the main, accessory, lateral, and recurrent canals and apical delta in a three-dimensional way.

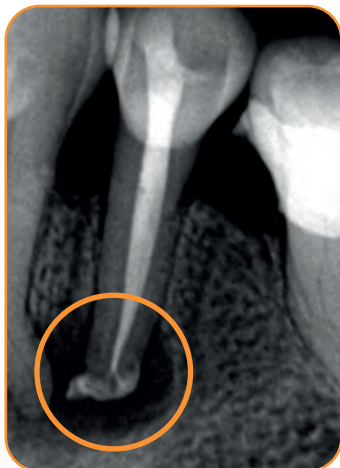


Image courtesy of Dr. Patricia Ferrari

### Radiopacity

BIO-C® SEALER presents high opacity ( $\geq 7$  mm of the Aluminium step-wedge), providing an excellent radiographic view.

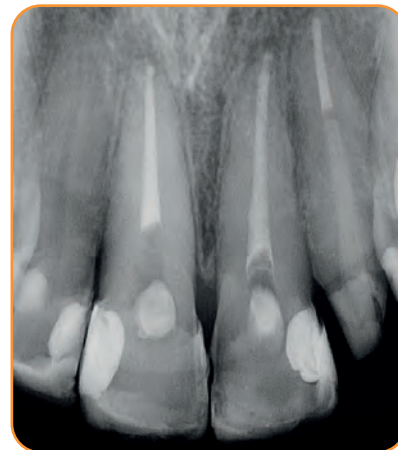


Image courtesy of Dr. Vicente Rocha

#### NO STAINS

The radiopacifier used in BIO-C® SEALER does not cause staining in the tooth structure (ZrO<sub>2</sub>)

### Setting Time

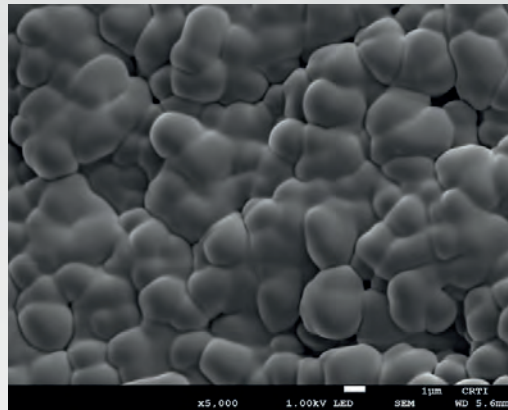
BIO-C® SEALER setting reaction occurs through the contact with the moisture from dentinal canaliculi and periapical tissues. Setting occurs between 120 and 240 minutes.

### Bactericidal

Its high pH ( $\sim 12$ ) gives BIO-C® SEALER an antibacterial action, which is highly desirable for endodontic cements, increasing its effectiveness and consequently giving a favorable prognosis to the treatment.

## Particle Size

Particle size ( $< 2\ \mu\text{m}$ ) provides BIO-C® SEALER with excellent flow, thin film thickness and higher diffusion to tissues, leading to a **faster regeneration**.



MEV FEG (5000x): Image obtained by secondary electron capture (Siqueira, C.P)

## Release of $\text{Ca}^{2+}$ ions

The release of  $\text{Ca}^{2+}$  ions is fundamental for the biological and chemical action of a filling cement. BIO-C® SEALER presents constant release of  $\text{Ca}^{2+}$  ions to the tissues, promoting biomineralization and stimulation of the tissues for their fast regeneration.

## Technical Data

|                           |                       |
|---------------------------|-----------------------|
| Setting Time              | $\leq 240$ minutes    |
| Radiopacity               | $\geq 7.0$ mm Al      |
| pH                        | $\cong 12$            |
| Flow                      | 23.46 mm              |
| Particle Size             | $< 2\ \mu\text{m}$    |
| Film Thickness            | 21 $\mu\text{m}$      |
| Solubility                | 2.86%                 |
| Resistance to Compression | $9.724 \pm 2.484$ MPa |

## Clinical Cases



Image courtesy of  
Dr. Ricardo Affonso Bernardes

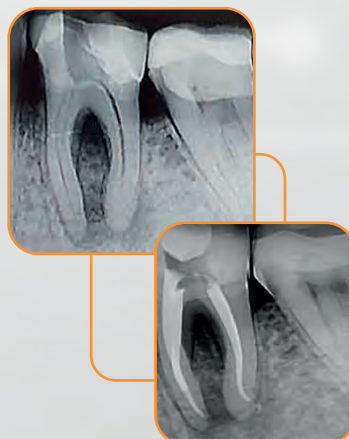


Image courtesy of  
Dr. Warley Tavares



Image courtesy of  
Dr. Débora Sellera

# Simplified!

Customer Service

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