Publications



Pre-Cinical Research Report

In vitro cytocompatibility and osteogenic potential of calcium silicate-based dental cements in a root canal-filling model

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C-Root exhibits time-dependent increases in cell proliferation and significantly higher levels of osteo-genic gene expression compared to other products, suggesting its potential as an excellent alternative for promoting bone formation and regenerative effects in root canal-filling material.

——— DOI: 10.1177/0300060519894801

C-Root SP, with its incorporation of strontium and promotion of bone cell differentiation and proliferation, demonstrates remarkable potential as a superior root canal sealer. Its favourable physicochemical properties and improved cell compatibility compared to other products make it a compelling choice for effective bone regeneration and dental applications.

—— DOI:10.19538/j.kq.2022.03.010

C-Root SP demonstrates favourable attributes as a root canal sealer, including effective apical sealing ability, comparable bond strength, fracture resistance, strong antibacterial effects, and good biocompatibility. These findings suggest that C-Root SP is a reliable and promising choice for root canal procedures.

--- DOI: 10.19538/j.kg.2022.03.010



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C-Root Dental Medical Devices Co., LTD

Global Patent: PCT/CN2019/097075

→ FDA Approved: 3021971019

◆ U.S. Patent: No.17/266.102

◆ EU Patent: No.19847130.2



Innovating bioceramic sealer with Strontium Silicate

Unleash the Future of Bioceramic Sealing with Cutting-Edge Patented Strontium Silicates



Product Description

C-Root SP is a premixed and injectable bioceramic Root Canal Sealer with a patented and innovative strontium silicate formula, specifically designed to seal the complexities within the root canal system during obturation. This innovative sealer not only promotes effective healing and mineralization but also ensures safe and effective permanent root canal filling and sealing.

Composition

Strontium Silicate, Zirconia, Calcium Phosphate, and Calcium Hydroxide.

Function

Root Canal Sealing and Permanent Filling. It is suitable for lateral condensation/compaction technique, single cone obturation technique, and vertical condensation technique.

Indications

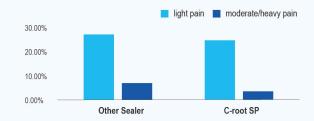
Permanent filling of root canal after it has been cleaned and disinfected properly.

	Your Current System	C-root SP
Biocompatible and osteogenic	?	1
Rapid periapical healing	?	1
Consistent flow	?	1
Construct strong chemical bonding between sealer material and dentin	?	1
Mild post-up reaction	?	1
Affordability	?	1
High antibacterial(pH > 12)	?	1
Zero shrinking	?	1
Successful sealing	?	1
Enhanced ability to promote bone healing	?	1
Strontium element can promote osteogenesis as well as angiogenesis	?	✓
Anti-inflammatory, greatly inhibits inflammatory factors such as TNF- α or PGE2.	?	1

Advantages

1. Superior biocompatibility

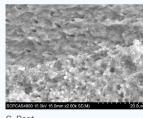
C-Root SP, utilizing strontium elements instead of calcium silicate, offers strong biocompatibility and helps alleviate inflammation and pain. A recent study found that C-Root SP, compared with other brands, postoperative pain is significantly reduced with single cone obturation method.

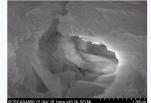


Effects of sealers extrusion on postoperative pain rate after root filling (painful cases with single cone technique over total cases) ¹

2.Excellent flow and sealabisity

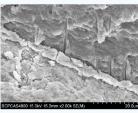
C-Root SP particles, being small and hydrophilic, can navigate the entire canal anatomy, including small lateral canals, fins, and cul-de-sacs. They can penetrate dentin tubules, promote remineralization with strontium substitution, bond to dentin and obturation materials to minimize voids, and effectively tomb eliminate microbes, preventing their recurrence.

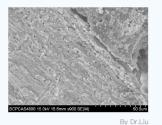




20 0um BCPCAS4800 15 0kV 15.1mm x40.0k SE(M) 1 00um

By Dr.Liu



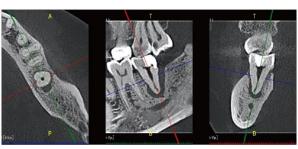


Other products on the market

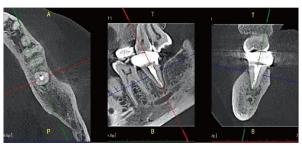
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3.Outstanding osteogenic and apical healing capacity

For cases with apical lesions, C-Root SP is unparalleled in accelerating bone healing. Its ability to create a strong apical seal, coupled with the osteogenic potential of strontium silicate, promotes long-term healing and ensures successful outcomes.



26/07/2022



08/03/2023



Post-op & After 3 months

Single cone By Dr.Xia



Post-op & After 18 months

ertical condensation By Dr.NiNa

Citation 1: Lei, G., BIAN, M., Li, N., Yan, M., Zhou, L., Li, Z., & Di, J., U, J. (2023). Comparison of apical extrusion rate and postobluration pain experience of C-Root SP and iRoot SP bioceramic root canal sealers. Oral Biomedicine, 14(1), 29-34. https://doi.org/10.3969/j.issn.1674–8603.2023.01.006