

	BIO-C TEMP	Standard Ca(OH) ₂ (Ultracal XS)	Report	Additional Information	Conclusion
Flow (mm)	23.35 ± 0.39	19.78 ± 0.20	FA 166 – Bench Test / Angelus	Methodology used ISO6876:2012 - Dentistry — Root canal sealing materials	Higher flow of BIO-C TEMP For the in vitro results, it is expected a greater ability to enter the root canal
Film Thickness (µm)	17.33 ± 2.31	31.67 ± 2.08	FA 166 – Bench Test / Angelus	Methodology used ISO6876:2012 - Dentistry — Root canal sealing materials	Smaller film thickness of BIO-TEMP C For the in vitro result, it is expected a greater capacity for contact with the dentin surface and interaction / smaller contact angle
Radiopacity (mm Al) (1)	7.0	4.0	FA 166 – Bench Test / Angelus	Methodology used ISO6876:2012 - Dentistry — Root canal sealing materials	The greater radiopacity of BIO-C TEMP For the in vitro result, greater ease of visualization is expected after root canal filling
Radiopacity (mm Al) (2)	7.1500 ± 0.7502	5.1233 ± 0.5408	Evaluation of pH, release of calcium ions and radiopacity, cytotoxicity and antimicrobials ..	Methodology used ISO6876:2012 - Dentistry — Root canal sealing materials	The greater radiopacity of BIO-C TEMP For the in vitro result, greater ease of visualization is expected after root canal filling
Solubility (%)	1.15 ± 0.09	0.06 ± 0.02	FA 166 – Bench Test / Angelus	Methodology used ISO6876:2012 - Dentistry — Root canal sealing materials	Greater solubility of BIO-C TEMP For the in vitro result, greater solubility is expected during removal with aqueous irrigating solutions
Weight loss (%)	36.57 ± 2.84	33.65 ± 6.81	FA 166 – Bench Test / Angelus	Mass loss was measure during the determination of solubility	Greater mass loss of BIO-C TEMP For the in vitro result, greater ease of removal is expected with aqueous irrigating solutions
% of removal material (mm³) (1)	86.90 + 1.11 (Conv) 98.60 + 1.39 (XP) 94.70 + 0.36 (US)	82.65 + 2.43 (Conv) 94.54 + 1.23 (XP) 90.32 + 1.34 (US)	Prof. Jardel USP – Ribeirão Preto/SP	Conv: conventional syringe+needle technique, XP: conventional technique+XP Endo Finisher instrument, US: conventional technique +ultrasonic inserts.	Easier removal of BIO-C TEMP using different instrumentation techniques
% of removal material (mm³) (2)	In progress	In progress	Prof. Jardel USP – Ribeirão Preto/SP	Quantitatively determine the ability to remove after a long period of use – reference material for comparison.	Waiting the results
% of removal material (mm³) (3)	In progress	In progress	Prof. Jardel USP – Ribeirão Preto/SP	Quantitatively determine the ability to remove after a short period of use – reference material for comparison.	Waiting the results
Release of calcium ions (ppm) (1)	313.89 ± 4.81	313.89 ± 2.46	Evaluate the pH, calcium ion release, and radiopacity, cytotoxicity and antimicrobial ...	After 7 days	Similar results to Ultracal XS
Release of calcium ions (ppm) (2)	In progress	In progress	Prof. Jardel USP – Ribeirão Preto/SP	Monitor in the short and long term the capacity of intracanal ionic release and pH Compare statistically with Ca(OH) ₂	Waiting the results
pH/minutes	12.57	12.83	Evaluation of the antimicrobial activity	After 24 minutes	Slightly higher pH results for Ultracal XS (Difference 0.26 pH units)
pH/days (1)	10.08	11.23	FA 166 – Bench Test / Angelus	After 31 days	Slightly higher pH results for Ultracal XS (Difference 1.15 pH units)
pH/days (2)	10.79 ± 0.11	11.01 ± 0.50	Evaluation of pH, release of calcium ions and radiopacity, cytotoxicity and antimicrobials ..	After 7 days	Slightly higher pH results for Ultracal XS (Difference 0.22 pH units)
pH/days (3)	In progress	In progress	Prof. Jardel USP – Ribeirão Preto/SP	Monitor in the short and long term the capacity of intracanal ionic release and pH Compare statistically with Ca(OH) ₂	Waiting the results
Antimicrobial activity (1)	Antimicrobial potential	Antimicrobial potential	Evaluation of the antimicrobial activity	Direct Contact – <i>Enterococcus faecalis</i> (ATCC – 29212)	Results similar to Ultracal with colony formation unit (CFU) equal to zero after 60 minutes
Antimicrobial activity (2)	Antimicrobial potential	–	Activity antimicrobiana	Direct and Indirect Contact – <i>Enterococcus faecalis</i> (ATCC 29212), (ATCC 4083)	Results showed a reduction in the colony formation unit (CFU) and consequently antimicrobial activity
Antifungal activity	Presents activity	–	Comparative analysis in vitro of antifungal activity of different endodontic cements and repair materials	Mainly <i>Candida albicans</i> (ATCC 10231) and <i>Candida glabrata</i> (ATCC 90030)	Results showed inhibition of fungal growth in the 7 day incubation period
Push Out	In progress	In progress	Prof. Jardel USP – Ribeirão Preto/SP	Determine the influence of the use of BIO-C TEMP on the quality of the obturation Push-out test	Waiting the results