

'Comparison of Tissue Dissolution Capability at Room Temperature: NaOCl EXTRA

Tissue dissolution by sodium hypochlorite: effect of concentration, temperature, agitation and surfactant addition

Haapasalo M. Division of Endodontics, Department of Oral Biological and Medical Sciences, University of British Columbia, Vancouver, Canada.

Aim: Sodium hypochlorite is the most commonly used endodontic irrigant due to its antimicrobial and tissue dissolving activity. The aim of this study was to evaluate and compare the effects of concentration, temperature and agitation on the tissue dissolving ability of sodium hypochlorite. In addition, a hypochlorite product with added surface active agent was compared with conventional hypochlorite solutions. Methods: Three sodium hypochlorite solutions from two different manufacturers in concentrations of 1%, 2%, 4% and 5.8% were tested at room temperature, 37°C and 45°C with and without agitation by ultrasonic and sonic energy and pipetting. Distilled and sterilized tap water were used as controls. Pieces of bovine muscle tissue (68±3) were placed in 10 ml of each solution for five minutes. In selected samples, agitation was performed for one, two or four 15 sec periods per each minute. The tissue specimens were weighed before and after treatment, and the percentage of weight loss was calculated. Results: Weight loss (dissolution) of the tissue increased almost linearly with the concentration of sodium hypochlorite. Higher temperatures and agitation considerably enhanced the efficacy of sodium hypochlorite. The effect of agitation on tissue dissolution was greater than that of temperature, continuous agitation resulting in fastest tissue dissolution. Hypochlorite with added surface active agent was most effective in tissue dissolution in all experimental situations. Conclusions: Optimizing the concentration, temperature, flow and surface tension can improve the tissue dissolving effectiveness of hypochlorite even 50-fold.

J Endod. 2002 Jul;28(7):501-2.

The demineralizing effects of EDTA at different concentrations and pH.

Serper A, Calt S. Department of Endodontics, Faculty of Dentistry, Hacettepe University, Ankara, Turkey.

The purpose of this study was to compare the effects of concentration and pH variations of EDTA on dentin demineralization. Twenty extracted, human permanent teeth with single canals were used in this study. Demineralizing effects of EDTA solutions at 10% and 17% concentrations at pH 7.5 and 9.0 were determined by measuring the amount of liberated phosphorus 1, 3, 5, 10, and 15 min after exposure. The results showed that the amount of phosphorus liberated from dentin was greater with increased EDTA concentration and increased time of exposure, and it was more effective at neutral pH than pH 9.0. The pH of the EDTA solutions did not display any significant alterations during the demineralization process.

PMID: 12126374 [PubMed - indexed for MEDLINE]

J Endod. 2009 Jan;35(1):95-7. Epub 2008 Nov 7.

Antimicrobial susceptibility of monoculture biofilms of a clinical isolate of Enterococcus faecalis.

Williamson AE, Cardon JW, Drake DR. Department of Endodontics, University of Iowa College of Dentistry, Iowa City, Iowa, USA. anne-williamson@uiowa.edu

The purpose of this study was to create a monoculture biofilm of a clinical isolate of Enterococcus faecalis and to determine susceptibility against four antimicrobial irrigants. Biofilms were subjected to 1-, 3-, and 5-minute exposures to one of the following irrigants: 6% sodium hypochlorite (NaOCl), 2% chlorhexidine gluconate (CHX) or one of two new products, <6% NaOCl with surface modifiers (Chlor-XTRA) or 2% CHX with surface modifiers (CHX-Plus) (Vista Dental Products, Racine, WI). It was hypothesized that NaOCl and CHX would be equally effective and that addition of surface modifiers would improve bactericidal activity of the respective irrigants compared to the original formulations. Results indicate that 6% NaOCl and Chlor-EXTRA were significantly superior against E. faecalis biofilms compared to 2% CHX and CHX-Plus at all time points except five minutes.

J Endod. 1987 Apr;13(4):147-57.

A scanning electron microscopic evaluation of four root canal irrigation regimens.

Baumgartner JC, Mader CL.

A scanning electron microscope was used to evaluate the debridement capabilities of four irrigation regimens on both instrumented and uninstrumented root canal surfaces. A typical smear layer was seen on the instrumented surfaces of specimens irrigated with saline and NaOCl. EDTA demineralized much of the smear layer from the instrumented surfaces and exposed the orifices of some of the underlying dentinal tubules. NaOCl removed all pulpal remnants and predentin from the uninstrumented surfaces of the root canal while EDTA and saline left pulpal remnants and predentin on the uninstrumented surfaces. The combination of NaOCl and EDTA used alternately completely removed the smear layer from the instrumented root canal surfaces as well as the pulpal remnants and predentin from the uninstrumented surfaces. In addition, the combination of NaOCl and EDTA caused the exposed calcospherites on the uninstrumented surfaces to have an eroded appearance.

PMID: 3106553 [PubMed - indexed for MEDLINE]

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ENDODONTISCHES WURZELKANALSPÜLSYSTEM

Die beste Wahl für beste Ergebnisse. Die Coltène/Whaledent Marken stehen für Kompetenz in der Herstellung klinisch bewährter und zuverlässiger Materialien, die den Erfolg endodontischer Behandlungen sichern.



CanalPro Slotted-End Tips

- Ideal zum Spülen von Kanälen, Taschen und Fisteln
- Slotted-end Tips haben eine seitliche Kerbe und sind nach vorne hin offen - zur sicheren Spülung

27 ga, 0,4 mm, 100 Stk./Beutel	REF 6001 1167
30 ga, 0,3 mm, 100 Stk./Beutel	REF 6001 1168

CanalPro Side-Port Tips

- Side-port Tips sind am Tip-Ende geschlossen und haben eine seitliche Öffnung

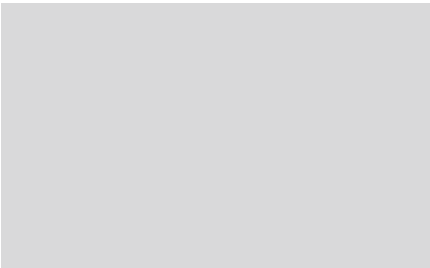
27 ga, 0,4 mm, 100 Stk./Beutel	REF 6001 1169
30 ga, 0,3 mm, 100 Stk./Beutel	REF 6001 1170



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Coltène/Whaledent AG
Feldwiesenstrasse 20
9450 Altstätten / Switzerland
T +41 71 757 5300
F +41 71 757 5301
info.ch@coltene.com

Coltène/Whaledent GmbH + Co. KG
Raiffeisenstraße 30
89129 Langenau / Germany
T +49 7345 805 0
F +49 7345 805 201
info.de@coltene.com

Coltène/Whaledent Inc.
235 Ascot Parkway
Cuyahoga Falls, Ohio 44223 / USA
T +1 330 916 8800
F +1 330 916 7077
info.us@coltene.com



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ENDODONTISCHE SPÜLLÖSUNGEN

CanalPro endodontische Spüllösungen sind die beste Wahl für eine erfolgreiche Behandlung. Sie sind so konzipiert, dass der Zeitaufwand so gering wie möglich ist und optimale Ergebnisse erzielt werden können.



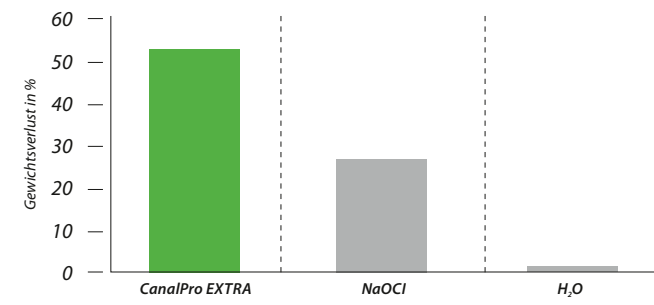
CanalPro™ NaOCl

- Zur Spülung von Wurzelkanälen und zur Gewebeauflösung vor und während der Aufbereitung
- Erhältlich als 3- und 6%-ige Lösung

3%	500 ml	REF 6001 9655
6%	500 ml	REF 6001 9656



Vergleich der Gewebeauflösung Auflösungsvermögen bei Raumtemperatur:



Ergebnisse

Lösung		CanalPro EXTRA	6 % NaOCl	H ₂ O
Gewebegewicht (mg)	Vor der Behandlung	79,78 ± 10,59	73,76 ± 6,10	62,18 ± 6,17
	Nach 5 Minuten	37,52 ± 6,54	53,72 ± 7,01	61,88 ± 5,62
Gewichtsverlust in % (±SD)		53,16 ± 2,60	27,25 ± 5,62	0,41 ± 1,10

CanalPro™ EDTA 17%

- 17%-ige EDTA Lösung (pH-Wert 8,5)
- Entfernt Smear Layer und Dentinrückstände
 - Öffnet Dentin-Tubuli:
 - Verbessert die Wirkung von Desinfektionslösungen (z.B. Alkohol)
 - Verbessert die Adhäsion von Sealern und Wurzelkanalfüllmaterialien

500 ml	REF 6001 9651
100 ml	REF 6001 9654



CanalPro™ CHX 2 %

- 2%-ige Chlorhexidindigluconatlösung
- Empfohlen als Zusatzspülung und während Revisionen
 - Äußerst effektiv gegenüber E. faecalis und Pilzen

500 ml	REF 6001 9658
100 ml	REF 6001 9659

CanalPro™ SyringeFill

Innovatives, modulares System für sicheres und effizientes Befüllen von Spritzen mit Spüllösungen

- Schutz vor Kontamination
- Sichere und saubere Dosierung
- Zeitsparende Ein-Handbedienung
- Materialverlust wird verhindert

CanalPro SyringeFill Station	REF 6001 9661
1 × Flaschenträger inkl. Sockel	
1 × CanalPro NaOCl 3%, 500 ml	
3 × CanalPro SyringeFill Cap	

CanalPro SyringeFill Holder	REF 6001 9667
1 × Flaschenträger	
1 × CanalPro NaOCl 3%, 500 ml	
3 × CanalPro SyringeFill Cap	

CanalPro SyringeFill Cap	REF 6001 9662
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„Das Natriumhypochlorit-Produkt mit beigefügtem Oberflächenmodifizierer war bei der Gewebeauflösung am effizientesten bei allen Konzentrationen und Temperaturen.“

Quelle: Journal of Endodontics September 2010;
Stojicic S, Zikovic S, Qian W, Zhang H, Haapasalo M

Color Syringes

- Erhöhte Sicherheit, Gefahr des Spritzenvertauschens wird minimiert
- Latexfreie, farbkodierte Spritzen lassen sich einfach und schnell der entsprechenden Spüllösung zuordnen
- Standardisiertes Luer-Lock Design



Farbige Spritzen 50 Spritzen/Box	10 ml	5 ml
Rot	REF 6001 1173	REF 6001 9321
Blau	REF 6001 1174	REF 6001 9322
Gelb	REF 6001 1175	REF 6001 9323
Weiß	REF 6001 1176	REF 6001 9324