

ENDODONTIC IRRIGATION SYSTEM



**CanalPro™**

Saves time and improves outcomes

 **COLTENE**

# CanalPro™

## ENDODONTIC IRRIGATING SOLUTIONS

When it comes to irrigating, CanalPro Endodontic Solutions are your best choice for successful treatment. We have engineered our endodontic solutions to minimize the time spent on irrigation, giving you the best approach to cleansing canals and the BEST OUTCOMES.

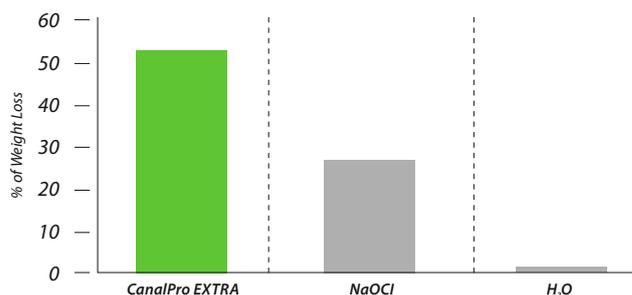


### CanalPro™ NaOCl

- For irrigation/debridement of root canals during and after instrumentation
- Available in 3% and 6% formula

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

### Comparison of Tissue Dissolution Capability at Room Temperature:



### Results

| Solution                         | CanalPro EXTRA   | 6% NaOCl      | H <sub>2</sub> O |              |
|----------------------------------|------------------|---------------|------------------|--------------|
| Tissue Weight (mg)               | Before Treatment | 79.78 ± 10.59 | 73.76 ± 6.10     | 62.18 ± 6.17 |
|                                  | After 5 minutes  | 37.52 ± 6.54  | 53.72 ± 7.01     | 61.88 ± 5.62 |
| Percentage of Weight Loss (%±SD) | 53.16 ± 2.60     | 27.25 ± 5.62  | 0.41 ± 1.10      |              |



### CanalPro™ EDTA 17%

17% EDTA solution (pH 8.5)

- Removes smear layer and dentin mud
- Opens dentin tubules for:
  - Disinfection solutions (e.g. alcohol) to work better
  - Better adhesion of sealers and obturation materials

|        |               |
|--------|---------------|
| 500 ml | REF 6001 9651 |
| 100 ml | REF 6001 9654 |



### CanalPro™ CHX 2%

2% chlorhexidine digluconate solution

- Recommended for additional rinsing and during revisions
- Very effective against E. faecalis and fungi

|        |               |
|--------|---------------|
| 500 ml | REF 6001 9658 |
| 100 ml | REF 6001 9659 |



### CanalPro™ SyringeFill

Innovative, modular system for the safe and efficient filling of syringes with irrigation solutions.

- protects against contamination
- safe and clean dispensing
- time-saving one-hand use
- prevents loss of material

CanalPro SyringeFill Station REF 6001 9661

- 1 × bottle holder incl. base
- 1 × CanalPro NaOCl 3%, 500 ml
- 3 × CanalPro SyringeFill Cap

CanalPro SyringeFill Holder REF 6001 9667

- 1 × bottle holder
- 1 × CanalPro NaOCl 3%, 500 ml
- 3 × CanalPro SyringeFill Cap

CanalPro SyringeFill Cap REF 6001 9662

«The sodium hypochlorite product with added surface active agent was the most effective in tissue dissolution at all concentrations and temperatures.»

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

## Color Syringes

- Help increase safety and minimize the chance of syringe swap
- Latex-Free, color-coded syringes offer a fast, easy way to organize and identify syringes for irrigants and solutions
- Standard luer lock style



| Color Syringes 50 syringes/box | 10 ml         | 5 ml          |
|--------------------------------|---------------|---------------|
| Red                            | REF 6001 1173 | REF 6001 9321 |
| Blue                           | REF 6001 1174 | REF 6001 9322 |
| Yellow                         | REF 6001 1175 | REF 6001 9323 |
| White                          | REF 6001 1176 | REF 6001 9324 |

### ' 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.

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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]

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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.

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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]

# CanalPro™

## ENDODONTIC IRRIGATION SYSTEM

Your best choice for improving outcomes. Coltène/Whaledent brands represent experience in providing essential and reliable endodontic products and materials that are clinically proven to ensure successful endodontic therapy.



### CanalPro Slotted-End Tips

- Ideal for irrigation of canals, pockets and fistulas
- Slotted and side-vented

|                        |               |
|------------------------|---------------|
| 27 ga, 0.4 mm, 100/bag | REF 6001 1167 |
| 30 ga, 0.3 mm, 100/bag | REF 6001 1168 |



### CanalPro Side-Port Tips

- Closed end for side port delivery

|                        |               |
|------------------------|---------------|
| 27 ga, 0.4 mm, 100/bag | REF 6001 1169 |
| 30 ga, 0.3 mm, 100/bag | REF 6001 1170 |

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