



**BRASSELER**  
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# TRITON®

ALL-IN-ONE IRRIGATION SOLUTION



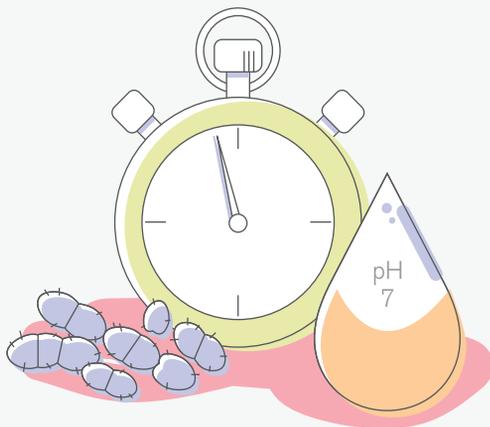
**BY YOUR SIDE**

# THE CHALLENGE...

Over the last few decades, there have been revolutionary advancements in endodontic shaping and obturation. Despite the introduction of several unique devices to aid in endodontic irrigation, the following challenges persist:

## Multi-step, multi-product irrigation

The majority of endodontists suggest using multiple endodontic irrigation solutions, including NaOCl (sodium hypochlorite/bleach), EDTA, and CHX (chlorhexidine). These products must be used in a specific, carefully prescribed sequence to avoid dangerous chemical reactions.

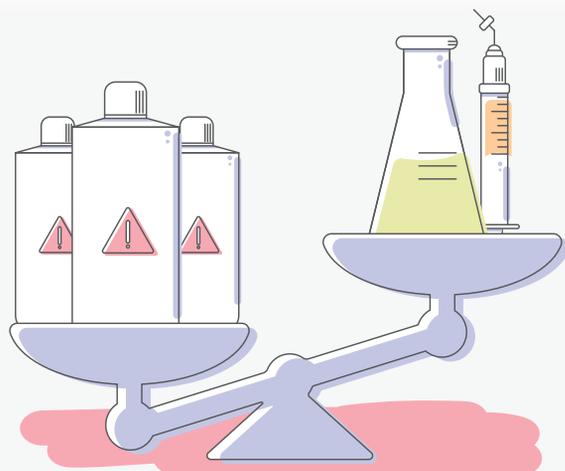


## Dentinal debris neutralizes NaOCl

One of the biggest challenges is that NaOCl buffers upon contact with dentinal debris. Once buffered, the pH neutralizes preventing NaOCl from effectively killing bacteria. EDTA is effective at countering this effect, but the two chemicals can't be used together at the same time because EDTA also buffers NaOCl.

## Higher concentrations of NaOCl

To overcome the buffering effect, many clinicians utilize a higher concentration of NaOCl which can be dangerous if accidentally extruded beyond the apex. It is impossible to calculate the buffering effect caused by dentinal debris and EDTA because the amount is variable and unique to each clinical case.



# THE SOLUTION...

## TRITON<sup>®</sup>

### ALL-IN-ONE IRRIGATION SOLUTION

Unlike traditional irrigants or other advanced 2:1 solutions, Triton works differently by avoiding the use of EDTA and CHX altogether. The non-NaOCl components in Triton proactively dissolve the dentinal debris allowing for a lower concentration of NaOCl to be exposed to organic debris without as much buffering. Synergistic and simultaneous dissolution of organic and inorganic debris permit the clinician to use lower volumes of irrigation solution and ensure maximum clinical efficiency.

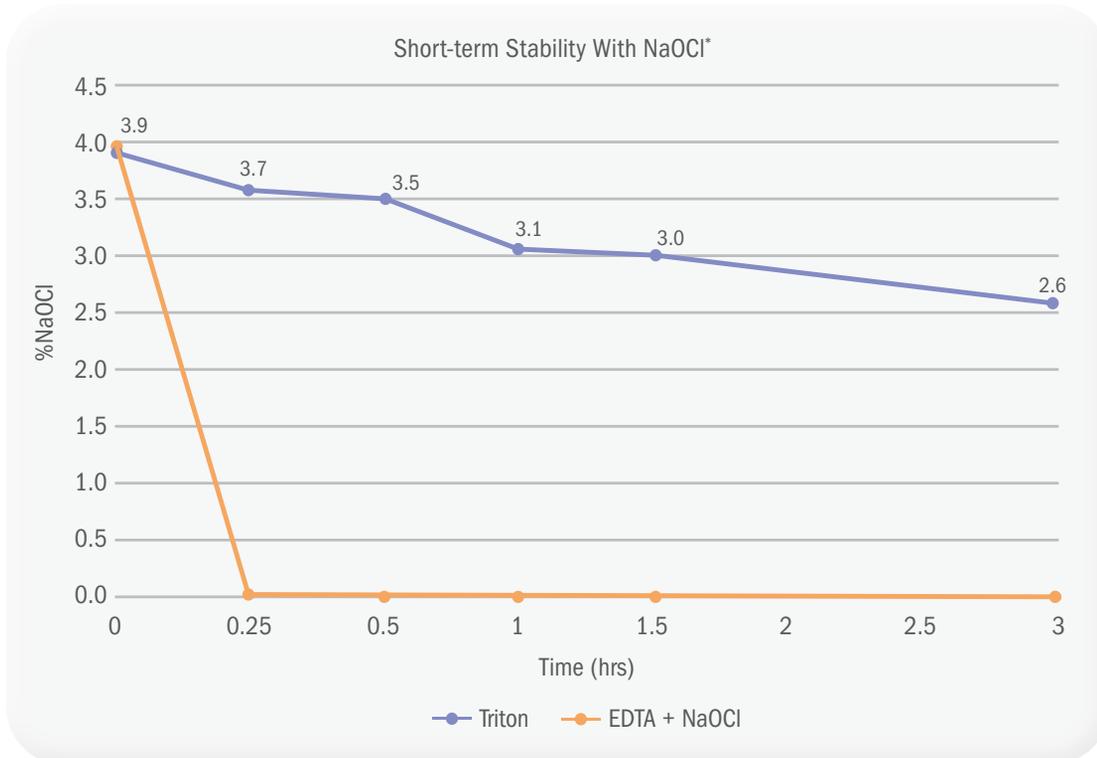


TRITON<sup>®</sup> ALL-IN-ONE IRRIGATION SOLUTION

Order No. 5028425U0

### Efficient and effective

By using a lower concentration of NaOCl and a patent-pending proprietary blend of surfactants and gentle chelating agents, Triton is the first irrigant to deliver all of the benefits of NaOCl, EDTA, and CHX in a single-step all-in-one irrigation solution.

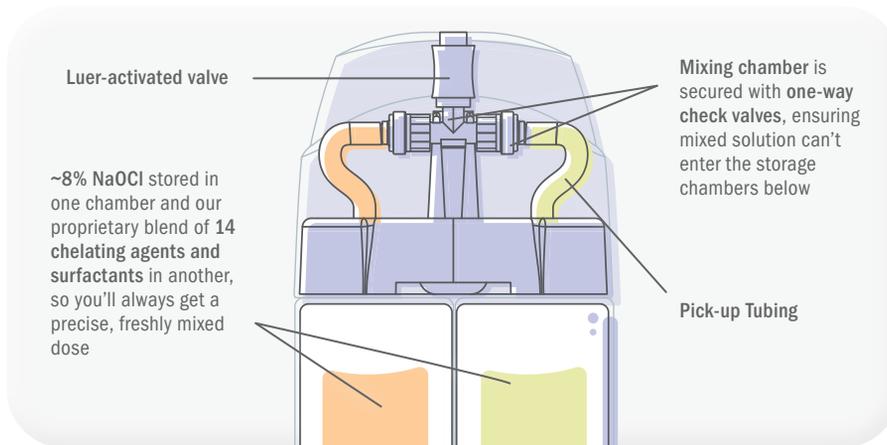


NaOCl is rapidly neutralized upon contact with EDTA (and inorganic dentinal debris). Triton maintains an effective NaOCl concentration for organic tissue dissolution while simultaneously allowing for inorganic debris removal in just one step.

\*Internal testing. Data on file.

# FEATURES & BENEFITS

- ✓ Multi-functional single irrigation solution reduces chair time, procedural steps, and overall irrigation costs
- ✓ Simultaneous organic and inorganic debris removal
- ✓ Patent-pending composition allows for a lower concentration of NaOCl to be used while also delivering improved efficacy
- ✓ More effective at smear layer removal vs. NaOCl with EDTA
- ✓ Dissolves organic tissue up to 1.7x faster than traditional NaOCl



## Simple, convenient, and easy to use

Triton replaces all irrigants with a single, lower concentration NaOCl-based solution.

## Consistent cleaning with predictable outcomes

Tested and proven effective by world-renowned endodontists, Triton has quickly become a preferred irrigation protocol.

## Cost-effective

Not only will Triton reduce chair time by eliminating the need for multiple irrigation solutions and sterile water rinses, but it also reduces the number of single-use disposable syringes and tips you'll require. In some cases, Triton can cut your total irrigation cost per procedure in half.

Procedural Step and Irrigation Cost Comparison\*

	NaOCl+EDTA+CHX	NaOCl+EDTA	2:1 Solutions	Triton
Solutions Used	3	2	2	1
Syringes Used	3	2	3	1
Tips Used	3	2	3	1
Water Rinse Required	Yes	Recommended	Yes	No
Avg Tip+Syringe Cost per Procedure	\$3.84	\$2.97	\$3.84	\$1.28
Irrigation Solution Cost per Procedure	\$1.19	\$0.85	\$2.38	\$1.87
<b>Total Irrigation Cost per Procedure</b>	<b>\$5.03</b>	<b>\$3.82</b>	<b>\$6.22</b>	<b>\$3.15</b>

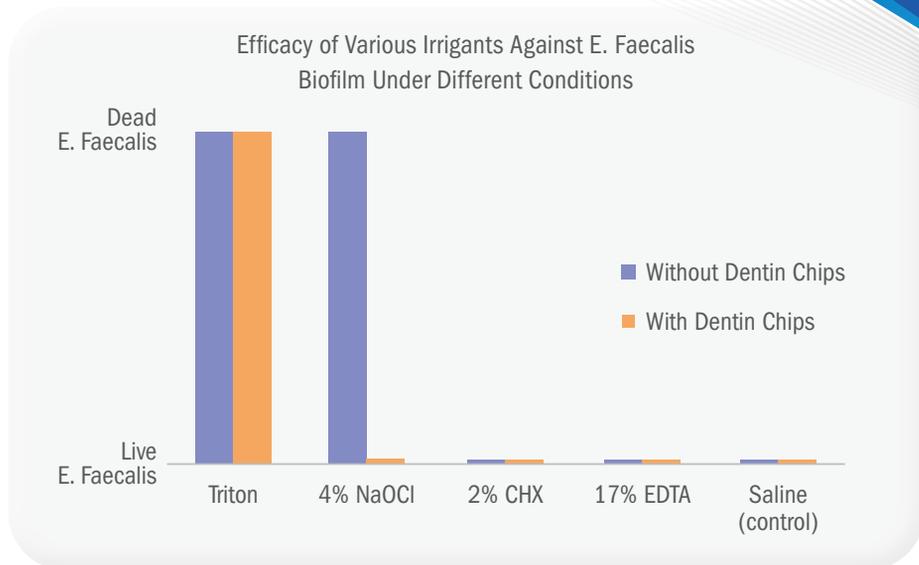
\*Data on file. The average general practitioner does 115 root canal therapies a year, making the total annual irrigation cost with Triton only \$362.25 in 2021. All dollar amounts shown are USD. For the estimated cost in local currency, use the current exchange rate.

Clinical consideration: A sterile water rinse is recommended before placing CHX or a CHX-containing "2-in-1" solution to avoid a para-chloroaniline (PCA) reaction.

# RESEARCH SUMMARY

## Effective against E. Faecalis biofilm

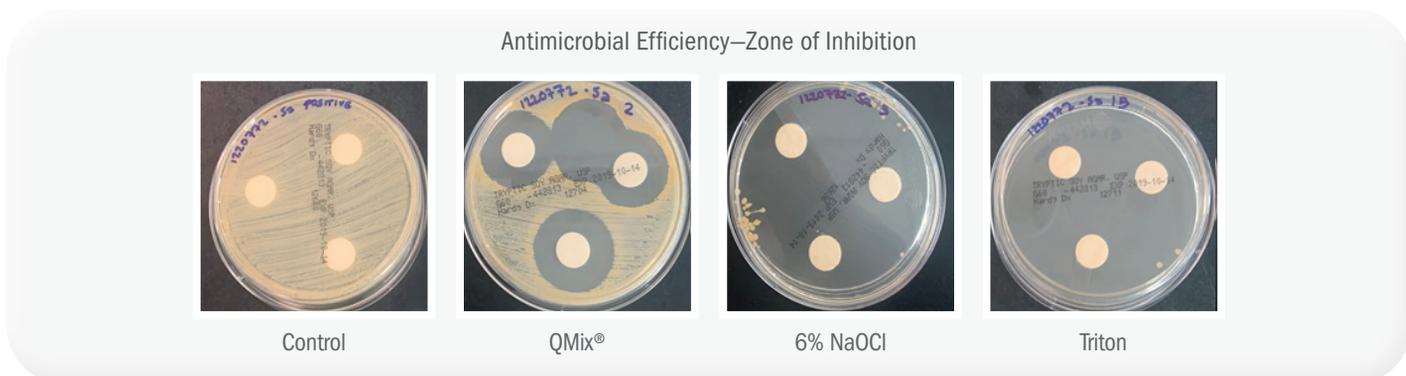
The efficacy of various irrigants against E. Faecalis biofilm was investigated both with and without dentin chips present. In the presence of dentin chips, only Triton was able to eliminate all E. Faecalis.



Dr. Karabucak, University of Pennsylvania, Dental Medicine Department of Endodontics (study in review)

## Microbes are susceptible to Triton

Triton provided the largest zone of inhibition compared to 6% NaOCl and QMix®.



Nelson Labs, Salt Lake City, UT. Study on file.

## Kills more bacteria quicker

In an ex vivo evaluation of live versus dead bacteria comparing three different irrigation protocols, Triton was more effective than 6% NaOCl + 17% EDTA half the time.



Xuyan Sheng, Zhejun Wang, Ya Shen (UBC)

QMix® is a registered trademark of DENTSPLY International.

# TRITON IN USE

## ▶ CASE 1

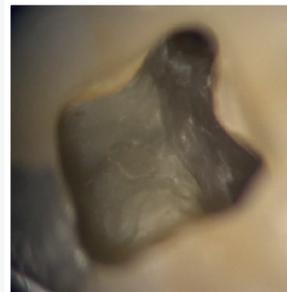


“Triton addresses the most essential and fundamental needs of endodontic irrigation in one solution. The sodium hypochlorite component provides tissue dissolution and disinfection while the novel combination of gentle chelating agents and surfactants simultaneously provide inorganic debris dissolution, saponification, and lubrication. Triton provides soft tissue digestion, surface disinfection and demineralization of the debris all at once making it a truly synergistic solution that greatly simplifies the irrigation process.”

**ALLEN ALI NASSEH, DDS, MMSc**  
*Real World Endo, Boston, MA*



*Delivery of Triton into canal (slippery consistency).*



*Clean and dry canals after use of Triton.*

*Clinical photographs courtesy of Allen Ali Nasseh, DDS, MMSc*

## ▶ CASE 2



“Using Triton in my practice has proven to be both convenient to use as an all-in-one solution and has provided impressive clinical results compared to the multiple solutions I have used over many years.”

**BRETT E. GILBERT, DDS**  
*Diplomate, American Board of Endodontics*



*Severely curved third order bend on the MB root of UR first molar.*



*No instrumentation achieved in the MB canals beyond initial curve, yet Triton cleaned this challenging root canal system, allowing sealer to flow into and seal this space.*

*Clinical images courtesy of Brett E. Gilbert, DDS*

# TRITON IN USE

## ▶ CASE 3

“Irrigation is the last frontier in endodontics, and Triton seems to be well-positioned to help tackle it. The simplicity of having one solution replace sodium hypochlorite and EDTA while providing an antimicrobial component will be appealing to any clinician whose goal is to have a more efficient workflow without sacrificing quality in the irrigation protocol.”

**REZA FARSHEY, DMD, CAGS**

*Diplomate, American Board of Endodontics*



*Patient presented for endodontic treatment of lower left second molar with a diagnosis of Symptomatic Irreversible Pulpitis secondary to caries and Symptomatic Apical Periodontitis.*



*Caries was excavated and canals were shaped and irrigated with Triton. The chamber and canals appear clean and glossy. The absence of debris in the difficult to reach areas confirms the efficacy of Triton as an all-in-one irrigant.*



*Vertical compaction of warm GP with Brasseler BC Sealer™ Hi-Flow™ with a bonded temporary restoration. The anatomical complexities captured in this seemingly straight forward case is partly due to an effective irrigation protocol utilizing Triton.*

*Clinical images courtesy of Reza Farshey, DMD, CAGS*

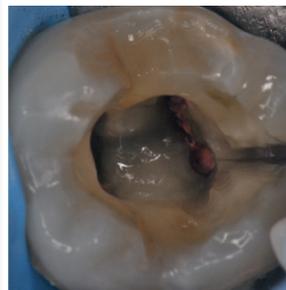
## ▶ CASE 4

**GIANLUCA PLOTINO, DDS, PhD**

*Endodontist, Rome, Italy*



*Preoperative radiograph of a first lower left molar presenting acute pulpitis due to crack penetrating the pulp chamber, evident in the clinical image.*



*Photograph taken at the end of the treatment, showing the clean pulp chamber floor after filling of the root canals.*



*Postoperative radiograph after root canal treatment and coronal reconstruction, showing a complex apical anatomy filled.*

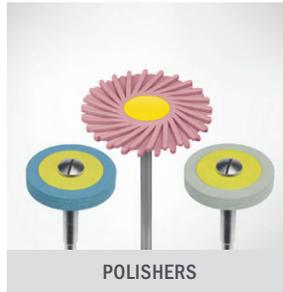
*Clinical images courtesy of Gianluca Plotino, DDS, PhD*



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