



Triton

All-In-One Irrigation Solution

FAQs

- 1. How is Triton different from NaOCl (sodium hypochlorite)?** Triton actually contains about 4% NaOCl in its automixed composition. During the development of Triton every irrigation solution imaginable was tested but nothing was found to be as effective as NaOCl for the dissolution of organic debris (e.g. remnant pulp tissue, etc.). The 4% concentration was found to be ideal in that it is less caustic than full strength (~6%) while not being overly neutralized in the presence of the other chelators and surfactants and still providing effective dissolution of organic debris.
- 2. How is Triton different from EDTA?** EDTA is excellent at dissolving the inorganic components of smear layer, such as hydroxyapatite which is the main constituent of dentin. EDTA, however, cannot dissolve the organic components of smear layer, which is accomplished using NaOCl. EDTA is also known in the literature to neutralizes NaOCl, which is why NaOCl and EDTA aren't mixed together to provide an all-in-one irrigation solution. Triton works differently by avoiding the use of EDTA. Triton has a proprietary blend of 14 different gentle chelators and surfactants which can work in the presence of NaOCl without buffering it the point where it is no longer effective at organic debris dissolution.
- 3. How is Triton different from other 2-in-1 irrigation solutions?** The other 2-in-1 solutions on the market are designed to provide the benefits of EDTA and CHX in one solution. They aren't designed to be an all-in-one solution that includes NaOCl (mainly because their solution would buffer NaOCl). The main benefit of CHX is that it has substantively meaning that it sticks around on the surface of the dentin to provide a more lasting antimicrobial effect. The issue is that CHX creates a toxic precipitation reaction if it comes in contact with NaOCl. For this reason many clinicians don't use CHX. The 2-in-1 solutions provide a solution that won't react as harshly with trace amounts of NaOCl. A typical 2-in-1 solution still requires that you use NaOCl followed by a water rinse followed by the 2-in-1 solution and a final water rinse. That is still two different purchased solutions, three syringes and three irrigation needles. Triton is one solution, syringe and needle to deliver all of the benefits of NaOCl, EDTA and CHX.



4. **What chemicals are present in Triton?** Triton is a two part solution and the bottle has two separate components (part A and part B). The novel automix cap precisely mixes the two parts to deliver the final solution. Part A consists of chelators, surfactants, pH modifiers, stabilizers, and water. Part B consists of 8% NaOCl, a pH modifier, and water. When Parts A and B are mixed, the resulting solution consists of 4% NaOCl along with the other components. The exact patent pending composition of Triton is proprietary as Triton is the first irrigation solution that allows for simultaneous organic and inorganic tissue dissolution in a premixed solution. See the SDS for more details.

5. **What is the irrigation protocol for Triton?** Irrigate canals throughout instrumentation ensuring that ample solution is used between instrument changes. Irrigation solution should always be present in the access cavity (when getting working length with an apex locator the canal should be filled with Triton but it should not be in the chamber as to avoid false readings). A final continuous irrigation using Triton for 60-90 is recommended. As with all irrigation solutions enhanced agitation of the solution is beneficial.

6. **How many uses do you get out of each bottle of Triton?** Our evaluators noted that they used considerably less volume of solution with Triton which makes sense given that you don't have to alternate between NaOCl (organic debris dissolution) and EDTA (inorganic debris dissolution). With Triton you will typically use 3-6 cc / mL per RCT. There is 480 cc/mL in each bottle of Triton. If you use 6ccs that is 80 RCTs. The typical GP does 2.5 RCTs per week x 46 weeks or 115 RCTs annually. A GP will go through 1-2 bottles of Triton annually and it will cover all their irrigation needs. That is \$150-\$300 per year for irrigation solution. This is not a big portion of the overall office expenditure.

7. **What is the shelf life of Triton?** Triton has a 24 month shelf life if stored in the refrigerator when not in use. The expiration date of Triton is listed on the bottle. Triton should not be used after it is expired.

8. **Does Triton require special storage conditions?** Storage conditions, and other important information, are communicated in the instructions for use (IFU). Triton should be stored in a refrigerator when not being used to ensure that the product maintains its effectiveness up to the expiration date on the bottle (2 years from the date of manufacture). Triton syringes should be brought to room temperature prior to clinical use. When withdrawing Triton from the bottle with a syringe the automix luer activated cap mixes the solution from each side of the bottle and the mixed solution will remain effective for at least one hour but we recommend to withdraw Triton from the bottle just prior to clinical use to maximize the effectiveness of Triton.



9. **How expensive is Triton compared to the different irrigation protocols?** This must be evaluated on a brand-by-brand basis but the below is a good rough guide to the cost comparison.
- a) NaOCl+EDTA: Triton saves at least 12%
 - b) NaOCl+EDTA+CHX: Triton saves at least 33%
 - c) NaOCl + 2 in 1: Triton saves at least 46%

	Branded Standard			Branded Std (no CHX)		2 in 1	All-In-One
	NAOCl	CHX	EDTA	NAOCl	CHX	Mix	Triton
	480mL Bottle	480mL Bottle	480mL Bottle	480mL Bottle	480mL Bottle	480mL Bottle	480mL Bottle
Doctor Purchase Price Container	\$40.95	\$54.30	\$54.30	\$40.95	\$54.30	\$149.05	\$149.97
Doctor Purchase Price per mL	\$0.09	\$0.11	\$0.11	\$0.09	\$0.11	\$0.31	\$0.31
mLs per Anterior RCT	6	3	3	6	3	6	6
Irrigation Solution Cost Per Procedure	\$1.19			\$0.85		\$2.38	\$1.87
Syringes used Per Procedure	3			2	2	3	1
Irrigation needles used Per Procedure	3			2	2	3	1
# of Solutions / Steps Required	3			2	2	3	1
Cost for Syringes + Irrigation Needles	\$3.84			\$2.97		\$3.84	\$1.49
Rinsing Required	Yes	Yes	Yes	Yes	Yes	Yes	No
Total Endo Irrigation Cost Per Procedure	\$5.03			\$3.83		\$6.21	\$3.36
Total Annual Endo Irrigation Cost	\$578.18			\$439.90		\$714.38	\$386.59
Triton Savings vs NaOCl + EDTA							-12%
Triton Savings vs. NaOCl + EDTA + CHX							-33%
Triton Savings vs. NaOCl + 2 in 1 Mix							-46%

This analysis is based off of Brasseler's retail price for existing solutions and Dentsply's list price for Q Mix vs. the Triton launch promotional price. Triton removes all the hassle from irrigation by avoiding the use of multiple solutions, syringes and tips and intermediate rinsing. The annual Endodontic irrigation cost is estimated based the ADA GP avg of 2.5 RCTs per week x 46 weeks which is ~115 RCTs per year. With irrigation being such a small portion of a clinicians overall product spend there really is no good reason not to use Triton.

10. **What third party research do you have on Triton?** Brasseler and Vista Apex have been working on Triton for over 10 years. We have invested significant R&D resources to find the perfect combination of ingredients that don't negatively affect each other and allow for simultaneous dissolution of organic and inorganic debris. Aside from our internal research we have requested that Triton be evaluated by several top research institutions including University of British Columbia, University of Pennsylvania, University of Minnesota, University of Rome amongst others. The research is summarized in our Triton University Research Summary document found on our website. At the time of writing this FAQ the studies are under review by reputable publications such as the JOE and IEJ. We believe that the studies summarized in our brochure will published in 2022. The decision to incorporate new technology into a dental practice is typically made if the product is better, simpler (more user friendly) and/or less expensive. We believe that Triton will be proven over time to achieve all of these ends.



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11. **Is Triton FDA and Health Canada approved?** Yes. Triton was approved by the FDA and Health Canada in 2021.
12. **Is Triton available in Europe?** We anticipate launching Triton in Europe sometime in 2022.
13. **Where can I purchase Triton?** Triton is only available direct through Brasseler USA. Contact Brasseler for any questions or to place an order. 800-841-4522
www.Shop.BrasselerUSA.com