

Waterlase MD Turbo Endolase RFT Root Canal Therapy

*Fights Endodontic Infection
More Effectively Than
Conventional Treatment*



waterlase **MD TURBO**

Endolase™ RFT
Root Canal Therapy System

BIOLASE

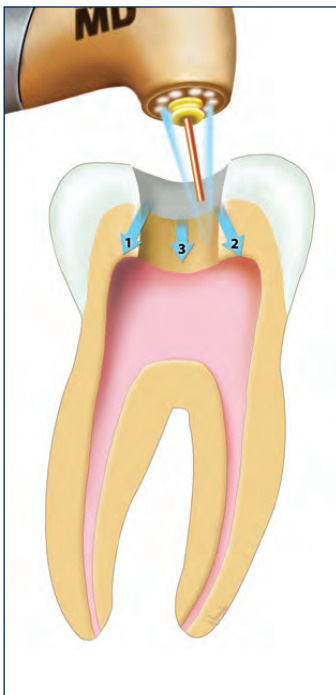
Reduces bacterial counts to levels approaching sterilization.

Waterlase YSGG 2780nm laser energy penetrates deep into dentinal tubules to kill more bacteria, without subjecting patients to the potential toxicity of sodium hypochlorite solutions.¹

Endolase Root Canal Therapy is simple, efficient & effective.

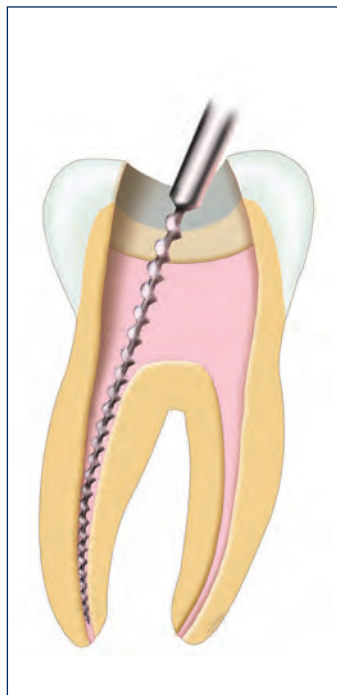
STEP 1

Access Preparation



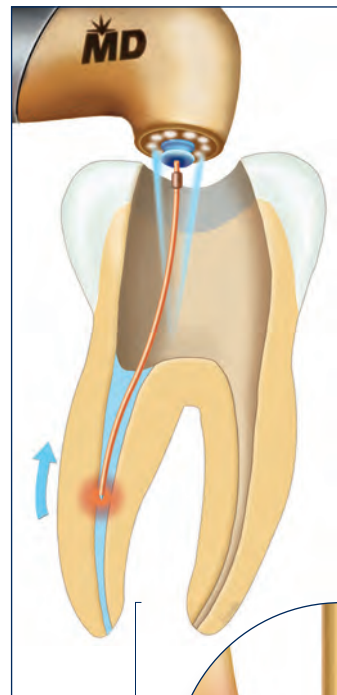
STEP 2

Conventional Instrumentation



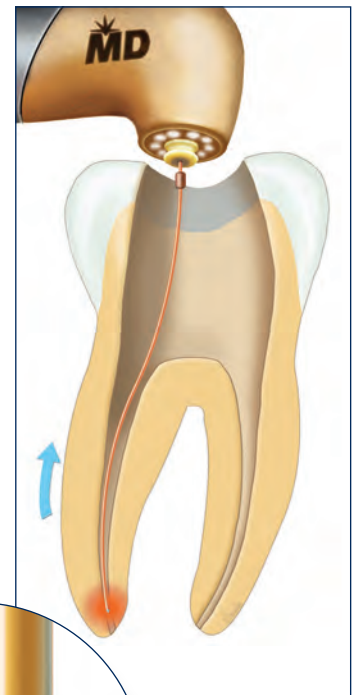
STEP 3

Cleaning & Enlargement

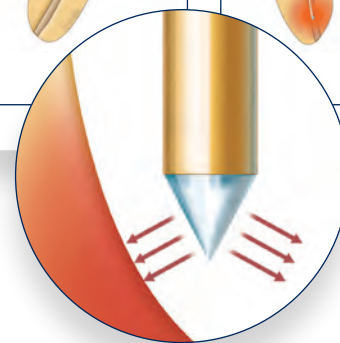


STEP 4

Disinfection

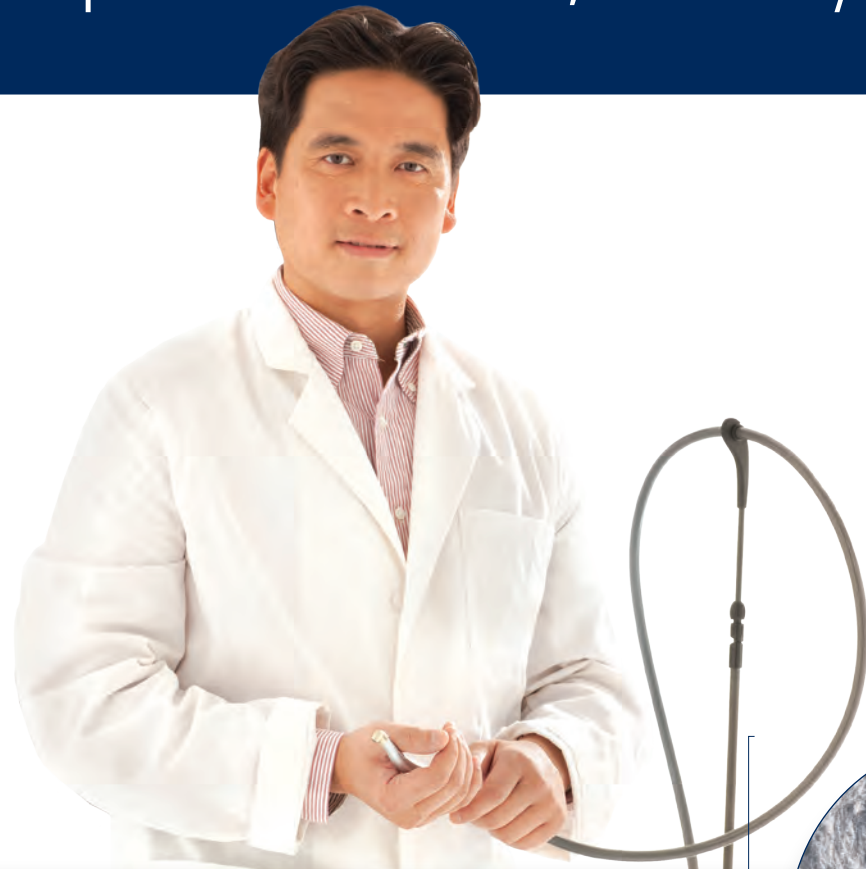


The unique beam pattern of the Radial Firing Tip will not fire directly into the apex of the root canal. It also increases penetration of canal wall by bacteriicidal laser energy.



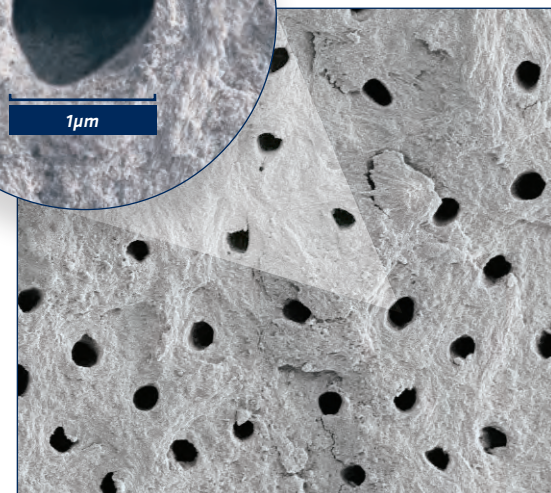
Waterlase MD provides significant advantages over conventional root canal therapy.

Superior disinfection, minimally invasive access, greater efficacy, and more promising long-term results.

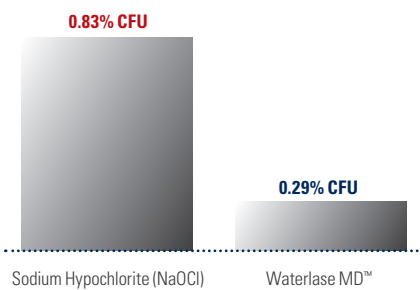


Waterlase treatment removes infection-harboring instrument smear layer.

The smear layer remaining after rotary or hand instrumentation not only contains infected tissue, but can seal infection within dentinal tubules. Scanning Electron Microscopy shows how treatment with Waterlase MD™ Radial Firing Tips leaves canal walls free of smear layer, and opens dental tubules, allowing YSGG laser energy to penetrate and destroy bacteria.



Mean Bacteria CFU's
(Colony Forming Units) of E. Faecalis
Remaining After Treatment as
Percentage of Positive Control Mean¹

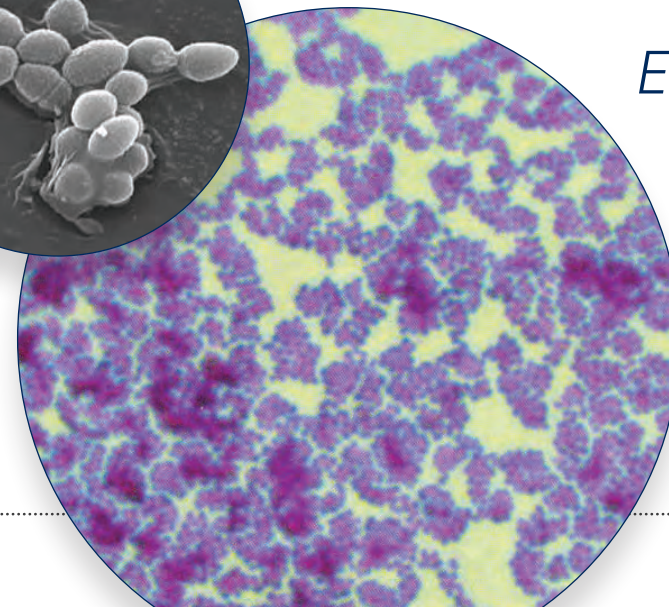
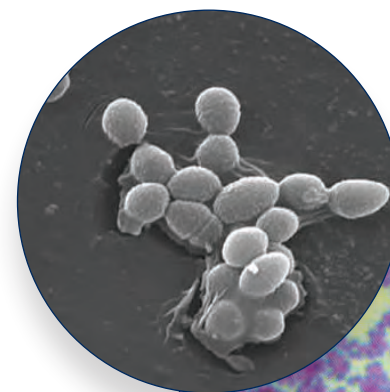


Waterlase MD™ reduced E. Faecalis 2.86 times more effectively than NaOCl.

The smaller the mean percentage, the greater the reduction in E. Faecalis.

Effective on the highly resistant Enterococcus Faecalis—to reduce retreatment risk.

Why do treatments fail even when all canals are located and cleaning and enlargement is successful? Research has shown that most root canal treatment failures are caused by persistent or secondary intraradicular infections, with E. faecalis, the most prevalent species.¹ Waterlase MD™ YSGG treatment may reduce the risk of retreatment.



Endolase™ RFT root canal therapy system.

The Endolase™ RFT root canal therapy system for the Waterlase MD™ is indicated for cleaning and disinfection of the root canal after endodontic instrumentation. The Endolase™ RFT root canal therapy system for the Waterlase MD™ includes one 200 micron and one 300 micron radial firing tip in a system that achieves a 99.7% reduction in bacterial counts in only 2-3 minutes of treatment time compared to 20-30 minutes with conventional treatment.



Endolase Root Canal Therapy Protocol & Settings

Step	Tip	Power	Pulse Rate	Air	Water	Mode
Access	MZ5*	4.5-5.5 W	15/20 Hz	60%	30%	H
Pulp Removal	MZ5*	0.75-1.0 W	20 Hz	2-11%	7-11%	H
Cleaning & Enlargement	RFT2/RFT3	1.25 W	50 Hz	34%	24%	H
Disinfection	RFT2/RFT3	0.75 W	20 Hz	10%	Off	H
Obturation & Restoration	Use any of your preferred techniques and materials to fill the canal and restore the tooth.					

*Not included in Endolase[™] RFT Root Canal Therapy System

Ordering Information

Description	Part Number	Tip Type
Anterior Kit	7200795	RFT2, 25mm Tip - 1 (EA) / RFT3, 21mm Tip - 1 (EA)
Posterior Kit	7200801	RFT2, 21mm Tip - 1 (EA) / RFT3, 17mm Tip - 1 (EA)
RFT 2-21 Bulk	7200820	RFT2, 21mm Tip - 30 (EA)
RFT 2-25 Bulk	7200821	RFT2, 25mm Tip - 30 (EA)
RFT 3-17 Bulk	7200822	RFT3, 17mm Tip - 30 (EA)
RFT 3-21 Bulk	7200823	RFT3, 21mm Tip - 30 (EA)

Backed by peer-reviewed articles & university studies.

All claims for Waterlase endodontic treatment are supported by published peer reviewed clinical papers and FDA Clearance # K071363.

"A 99.7 percent reduction in bacterial counts could be obtained using the laser." – Gordon et al., JADA 2007; 138 (7): 992-1002¹

"The Er,Cr:YSGG laser, in conjunction with radial-firing tips, is a suitable tool for the elimination of bacteria in root canals and for removal of smear layer"
– Schoop et al., Lasers Med Sci 2007^{2,3}

"The Er,Cr:YSGG laser with radial emitting tip has a significant antimicrobial effect on dentinal tubules infected with E. faecalis."

– Gordon et al., JADA 2007;138(7): 992-1002¹

Achieve laser proficiency.



1. Two-day Certification Training Course combining lecture, hands-on exercises and/or live patient demonstrations included with the purchase of each Waterlase MD™ Turbo.
2. Biolase is a world leader in laser education and training through its education arm, the World Clinical Laser Institute. With more than 10,000 members worldwide, the WCLI is the largest dental and medical laser education organization in the world.



CLINICAL ARTICLES

1. The antimicrobial efficacy of the erbium, chromium:yttrium-scandium-gallium-garnet laser with radial emitting tips on root canal dentin walls infected with *Enterococcus faecalis*: Wanda Gordon, DMD, Vahid A. Atabakhsh, DDS, Fernando Meza, DMD, Aaron Doms, DDS, Roni Nissan, DMD, Ioana Rizoiu, MS and Roy H. Stevens, DDS, MS JADA 2007; 138(7): 992-1002.
2. The impact of an erbium, chromium: yttrium-scandium-gallium-garnet laser with radial-firing tips on endodontic treatment: U. Schoop, A. Barylyak, K. Goharkhay, F. Beer, J. Wernisch, A. Georgopoulos, W. Sperr, A. Moritz Lasers in Medical Science; DOI 10.1007/s10103-007-0520-4.
3. The use of the erbium, chromium:yttrium-scandium-gallium-garnet laser in endodontic treatment. The results of an in vitro study: Ulrich Schoop, DDS, MD, Kawe Goharkhay, DMD, MD, Johannes Klimscha, DMD, MD, Manuela Zagler, DMD, Johann Wernisch, TD, PhD, Apostolos Georgopoulos, MD, PhD, Wolfgang Sperr, DDS, MD, PhD and Andreas Moritz, DMD, MD, PhD JADA 2007;138(7): 949-955.

U.S. PATENT NUMBERS

4,940,411; 5,116,227; 5,151,029; 5,232,367; 5,257,935; 5,267,856; 5,324,200; 5,342,198.
Other U.S. and international patents granted and pending.

CAUTION

Federal law restricts this device to sale by or on the order of a dentist or physician.

About Biolase.

Founded in 1986, Biolase Technology, Inc., specializes in lasers for medicine and dentistry that feature proprietary and patented technologies for reducing pain and improving clinical results.

Only Biolase combines the leading laser technology – continuously improved through ongoing clinical R&D and engineering – with unmatched training, practice integration support and service.

Biolase leads the global dental laser market with over 12,000 lasers in use today and the most complete family of dental lasers – from diode lasers to the most advanced soft- and hard-tissue laser, the Waterlase MD™ Turbo.

The most complete family of dental laser solutions, to match the needs of you and your patients perfectly as you expand your laser applications:

ilase™

The Personal Laser, for everyday soft-tissue procedures.



eqlase™

The Total Diode Solution™, including whitening and temporary pain relief.



waterlase™c100™

Economical, entry-level soft and hard tissue laser for common restorative and pediatric procedures.



waterlase™MD TURBO™

Best-of class soft and hard tissue laser for common and advanced restorative, periodontics, endodontics, cosmetic, surgical and pediatric procedures.



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Deep Pocket Therapy with
New Attachment, and
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