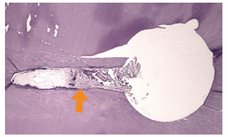
LACK OF ADAPTATION TO ROOT CANAL ANATOMY

Conventional root canal instruments are often unable to fully reach the complex morphology of the root canal system, leading to several challenges:

- Traditional instruments leave many areas of the root canal untreated
- Debris is pushed to the outer margins of the root canal, reducing treatment success
- Excessive removal of healthy dentin weakens the tooth structure

© Courtesy of Dr. Frank Paqué, University of Zürich



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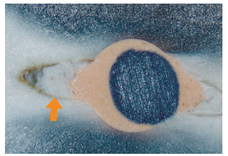
INSUFFICIENT CLEANING AND DISINFECTION

- Compacted debris prevents disinfecting solutions from reaching all areas of the root canal
- Apically extruded debris delays periodontitis healing and may cause postoperative discomfort
- Even advanced disinfection methods such as ultrasonic or sonic activation and the use of chelating agents often fail to achieve satisfactory results
- A complete 3D root canal filling is not possible
- Cleaning and disinfection remain inadequate even in retreatments



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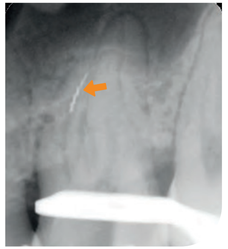
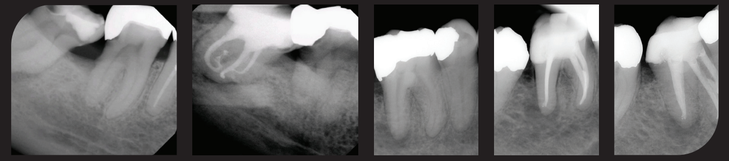
SAFETY RISKS DUE TO INSTRUMENT DESIGN

- Rotating instruments are prone to fractures and often cannot be retrieved from the canal; they may also cause false paths or perforations
- Excessive dentin removal can increase the risk of tooth fractures
- High pressure during preparation can cause microfractures in the dentin
- The need for separate irrigation poses a high risk of irrigation accidents





Dr. Tomas Lang, Deutschland

Third mandibular molar with very curved canals. Working length could not be reached neither with rotary instruments nor with NiTi hand files. The entire treatment was conducted with the SAF System. Obturation by heat-treated GP.

Dr. Michael Solomonov, Israel

Mandibular first molar that was treated with the SAF System. The angulated X-ray demonstrates the high level of cleaning of the long-oval distal canal, as well as the isthmus between the mesial canals. Obturation was done by combination of lateral compaction and warm vertical compaction of GP.

EXEMPLARY LITERATURE ON THE SELF-ADJUSTING FILE (SAF)

Supported by **200+** peer-reviewed articles

- „Although it touched more of the root canal walls, the SAF system removed less dentine". *Zuolo et al, Int Endod J 2018;51(5):564-571*
- „By using SAF instrument, flat-oval-shaped canals of mandibular incisors were homogenously and circumferentially prepared". *Versiani et al, J Endod 2011;37:1002-1007*
- „Results appeared to have confirmed the superiority of the SAF in bacterial biofilm reduction in these hard-to-reach apical anatomic irregularities". *Lin, Shen, Haapasalo, J Endod 2013;39(5):658-663*
- „SAF promoted a significant reduction in bacterial populations even after only 2 minutes regardless of the NaOCl concentration". *Alves et al, J Endod 2011;37(10):1451-1455*
- „The SAF protocol was significantly more efficient for debridement of oval root canals than the rotary ... „. *De Deus et al, J Endod 2011;37(5):701-705*
- „... SAF system resulted in less hard-tissue debris accumulation in isthmus-containing root canal systems compared with instrumentation with ProTaper rotary files". *Paque et al, Int Endod J 2012;45:413-418*
- „Patients treated with the SAF system were associated with significantly less postoperative pain". *Jain et al, ENDO (Lond Engl) 2016;10(3):153-160*
- „SAF instrumentation results in cleaner root canals with less debris in canal irregularities and better adaptation of thermoplastic gutta-percha". *Pawar et al, Biology 2021;10,1074*

DISCOVER SAF INFINITUM.

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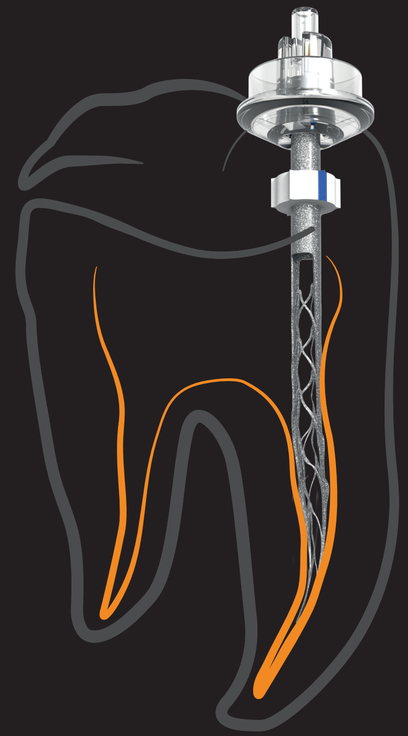
SAF INFINITUM



THE NEW ENDODONTIC GOLD STANDARD

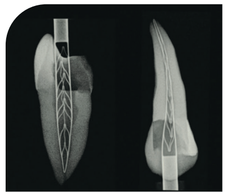
EN

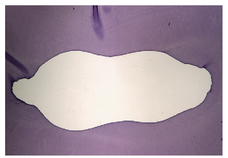
PREPARATION
IRRIGATION
SONIC ACTIVATION
IN ONE STEP

Enjoy Endo

MADE IN GERMANY

SAF – Our Solution





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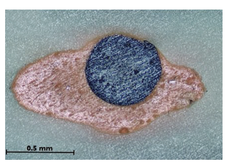
ANATOMICALLY ADAPTIVE PREPARATION THROUGH ROOT CANAL CONFORMITY

The Self-Adjusting File (SAF) was developed to adapt to the natural anatomy of the root canal.

+ Made of a flexible, structured Nitinol design with a hollow lattice structure, the SAF adapts to the individual root canal shape through gentle compression
+ Rapid vertical vibrations enable highly efficient, minimally invasive preparation in just 2 minutes
+ The SAF expands the root canal by only 2 to 3 ISO sizes, following the natural root canal anatomy while preserving healthy dentin

SIMULTANEOUS CLEANING AND DISINFECTION



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+ Continuous irrigation through the inner lumen of the SAF removes even the finest debris particles while the vibration of the file simultaneously sonic-activates the disinfecting solution
+ The synergistic effect of preparation, irrigation, and sonic activation prevents debris compaction and extrusion
+ Used irrigation fluid and debris are continuously removed and replaced by the integrated suction system
+ Thorough cleaning allows for optimal 3D root canal filling with any standard obturation technique
+ Retreatment procedures are highly efficient, as infected filling material is reliably removed and aspirated

MAXIMUM SAFETY FOR OPTIMAL TREATMENT OUTCOMES

+ The Nitinol lattice structure and adaptive function of the SAF ensure superior safety by preventing fragment entrapment
+ Unlike rotating instruments, the SAF does not cause microcracks in the dentin, preserving the structural integrity of the tooth and preventing fractures
+ The hollow design of the SAF, combined with pressure-free irrigation and suction, prevents irrigation accidents—even with intensive use of irrigants

Base Station

SAF INFINITUM Base Station with Integrated Irrigation and Suction

- 7-inch touchscreen for irrigation and suction control
- Tank with separate containers for fresh and used irrigation fluid
- Motor speed control
- Access to instructional and training system
- Flexible use with battery operation

Rechargeable Batteries

- Two batteries for seamless treatment

Irrigation with Dual Rinse HEDP

- Enables the combination of sodium hypochlorite and a chelator in a single irrigation solution
- Simultaneous removal of organic and inorganic debris
- • Automatic mixing of the irrigation solution in the base station

Application Options

Wireless Transmitter – Enables SAF Operation with Your Dental Unit

- Compatible with standard micromotors (ISO type)•
- Controls rotational speed
- Operates the base station
- Powered by the rotation of the micromotor

optional **Wireless Motor – The Battery-Powered Alternative**

- Provides even more comfort during treatment
- Perfectly balanced
- Independent of the dental unit

Handpiece

- Revolutionary single-use handpiece No maintenance required
- Irrigation and suction directly through the handpiece
- Small handpiece head for optimal visibility
- Fully recyclable through ReDent Nova

Files and Accessories

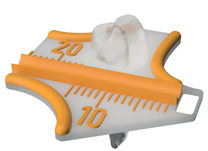
Self-Adjusting-File (SAF)

- Available in three diameters (1.5, 2.0, and 3.0 mm) and three lengths (21, 25, and 31 mm)
- Adapts to individual root canal anatomy
- Direct irrigation delivery through the file
- Sonic activation of the irrigant via file vibrations
- Simultaneous suction through the shaft for optimal debris removal and maximum comfort

recommended

PreSAF-Instruments

- Heat-treated rotary glide path instruments
- Compatible with conventional endodontic handpieces and motors
- Enables quick and minimally invasive glide path creation before using SAF



Training Set

- Realistic tooth models for practicing SAF INFINITUM application
- Accompanying instructions