



radioSURG®

PROFESSIONAL RADIOSURGICAL UNITS FOR
THE DEMANDING DENTAL MEDICAL FIELD

THE BASICS OF RADIO SURGERY

What is radio surgery?

Radio surgery is the use of high frequency energy for cutting, cutting with simultaneous coagulation and coagulation on the human (or animal) body.

What is radio frequency?

Radio frequency is an electric current which is produced by the radioSURG® with a frequency of 2.2 MHz (2.200.000 cycles per second). This energy of 2.2 million cycles/sec. is concentrated at the tip of the electrode. As soon as contact is made to the tissue, the cell fluid expands and the cell vaporizes. The effect of cutting or coagulation occurs quicker with units working within the megahertz range and, therefore, does not thermically damage the surrounding area. This is known as "cold cutting". The electrode itself is only the conductor of the high frequency current, and does not become hot.

What are the advantages of radioSURG® units compared to kilohertz units?

The voltage of the radioSURG® is regulated and is, therefore, constant during application. Due to constant voltage it is possible to accomplish an excellent, clean cut, which barely differs from an incision made with a scalpel and the excisions can be examined up to the cut edges. Condensers (accumulator for electric energy) that are incorporated into the radioSURG® are to prevent any sudden discharges during the operation, that can cause sudden muscle convulsion and a short and intense pain. In principle the radio surgical unit can substitute a scalpel. Since operations can be performed without tension, pressure or any movement of the tissue, it is suitable for any type of surgical intervention, especially when very fine incisions are required, when there should not be any tissue shrinkage, and if minor or major bleeding is expected. The absolute sterility of cuts along the cutting line of the electrode is a major advantage of radio surgery, as this prevents germs from being transported – which can happen when using a scalpel.

Dr. med. dent. H Sellmann wrote in a Journal: *"The fully filtered wave in the Megahertz range accomplishes an excellent clean cut, so that the excisions can be examined histo-pathologically, without any falsifying necrosis. Through the pressure-free guiding of the hand piece, no force has to be applied and therefore there is no tissue displacement".*

radioSURG®

A FURTHER DEVELOPMENT OF THE
HF-SURGERY WITH 2.2 MHZ REVOLUTIONIZES
YOUR EVERYDAY PRACTICE!



APPLICATIONS IN THE DENTAL FIELD



1.1



1.2

Minimal bleeding during an ablation with an oval dental loop electrode.

Picture No 1.2: For the Ferrule-Effect the necessary hard parts of the dental root are visible. The dark discoloration is a result of the decayed root.



2.1



2.2

The lingual fibroma is removed with a loop electrode. The necrosis-free surface heals quickly.



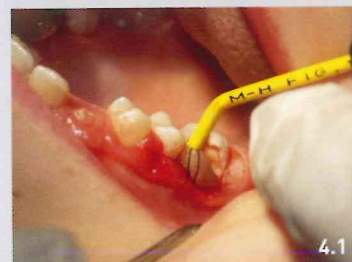
3.1



3.2

Over the decayed lesion on 32 the gum is ingrown.

The gingivectomy to expose the subgingival caries causes no tissue necrosis, an undesirable retraction of the gingiva is not expected.



4.1



5.1

Sulcus Management after removal of carious substance vestibular and distal 16 prior to pre-orthodontic reconstruction.

Haemostasis of the bleeding fistula before further reconstruction



Did you know that we are also the manufacturer of the Ethyl-2-Cyanoacrylate tissue adhesive EPIGLU® that also adheres on the oral mucous membrane?

With the practical Single Dose the adhesive can be applied precisely in every region of the oral cavity and smoothed out with the pipette attachment. Get to know the innovative tissue adhesive EPIGLU®, that is more economical than needle and thread.



6.1



6.2

Removal of the frenulum on a disabled child. The wound care is carried out exclusively with EPIGLU®.

1 week post-operative and the wound has healed without any complications.

All application images were kindly provided by Dr. med. dent. Hans Sellmann.

THE UNIVERSAL UNIT FOR ALL SURGICAL TREATMENTS BOTH MINOR AND MAJOR



radioSURG® Model "TP" monopolar and bipolar

Features and Innovations:

- 3 Modes of operation and outputs: monopolar cutting and cutting with simultaneous coagulation / monopolar and bipolar coagulation
- Non-contact switching of output
- Digital output power adjustment 1-100 Watt
- Adjustable coagulation degree and adjustable duration of coagulation
- Separate hand-pieces for cutting and coagulation
- No changing of electrodes during surgery
- Optional use of hand-piece or foot pedal
- Frequency 2.2 MHz



radioSURG® Model "m" monopolar

Model "m" as in Model "TP", but without bipolar coagulation.

The economical alternative for dentists that do not operate often but demand high standards.



Dental Electrode Set

Almost all operations can be carried out with this dental electrode set. As the shafts are bendable, they can be adjusted to every oral situation. There are autoclavable electrodes and sterile disposable electrodes available. Further forms of electrodes and accessories can be found in our product catalogue.

WE HAVE NOT INVENTED RADIO SURGERY BUT FOR ITS APPLICATION WE HAVE SET NEW STANDARDS!