HOFFMANN´S

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HOFFMANN´S

Check out
our proposal:

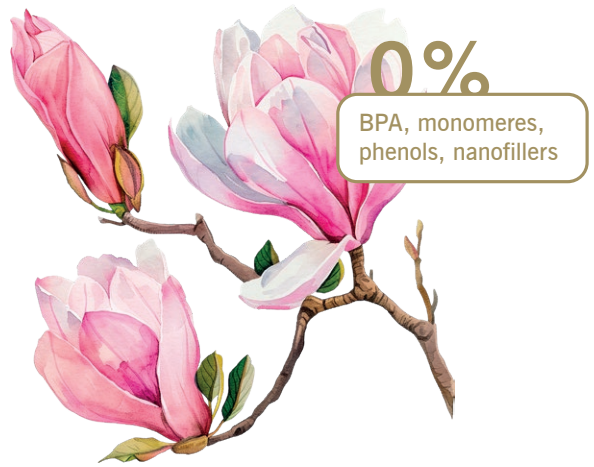
Welcome

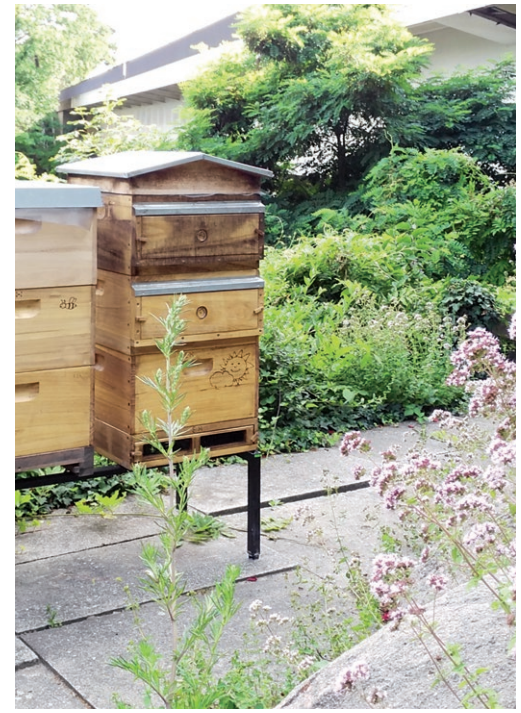
to the new edition of Hoffmann's comprehensive catalogue. The history of the company began in 1892 with the invention of zinc phosphate cement by the chemist and original company founder Dr. Otto Hoffmann.

Hoffmann's phosphate cement is a reliable and long-lasting classic. The gold standard among dental cements is an indispensable part of the restorative material range of practitioners all over the world who pay attention to sustainability. We deliberately refrain from using nanofillers or modifying cements with monomers and synthetic resins.

Our sustainable and reliable materials for conservative and restorative dentistry are manufactured in Berlin using craftsmanship, modern processes and natural raw materials. When developing new products, we are increasingly focussing on substances known from phytotherapy and combine them with proven inorganic chemistry.

Please Note: Our family business has survived two World Wars, a number of economic crises and the recent pandemic. But whether our company will survive the Medical Device Regulation (MDR 2017/745) is questionable. We are vigorously campaigning for short-term corrective measures which will not only help us stay in this business but will keep an entire industry in Europe. We need your support in order to safeguard supply security and to strengthen European competitiveness with regard to SMEs, which will ultimately benefit oral health around the globe. You can find out more by following the QR code.





The Manufactory

Hoffmann's products are made with precise craftsmanship and great attention to detail. In the 19th century the master and his stoker toiled for several days in order to ensure the successful firing of their cement. The furnace was fed with wood and coal and heated to a maximum temperature of 1400 °C. Ever since, the raw material mixture is filled into saggers per hand. Today, however, modern technologies are used and combustion takes place in a high-performance computer-controlled furnace. We are proud to say that our production processes are CO_2- neutral.

Our qualified staff, who have been loyal to us for many years, is entrusted with the processes of manufacturing and distribution. They are going the extra mile every day. Our multicultural team of employees allows us to accept different perspectives and understand the different needs related to dental products. As an entrepreneurial family, we anticipate things in the long term. This includes flexible working hours for parents and grandparents as well as investment in education and training.

What unites us is the willingness to learn from nature and the belief in sustainability.

2nd generation
Dietbert Hoffmann (1916-2000)

3rd generation
Tobias Hoffmann

Quality Spanning Three Generations

Award-winning safety

As early as the 19th century, Dr. Otto Hoffmann formulated the requirements that still apply today, according to which high-quality dental products should be manufactured industrially. They should be available to as many people as possible for professional dental care.

His striving for quality was already awarded the silver medal at the FDI's fifth International Dental Congress in Berlin in 1909. The second generation consistently continued to develop these high quality standards. Dietbert Hoffmann was an active member in national and international standardization organizations for the generation and enhancement of material standards from 1967 onwards.

Today, all activities are pooled in the ISO/TC 106 Dentistry, in which the Hoffmann Dental Manufaktur is involved. A quality management system, which represents the entire company, was introduced in 1995 by today's Managing Director Tobias Hoffmann. Close monitoring of the entire value creation chain is ensured through strict control of raw materials and end products, as well as regular in-process controls. All testing is carried out in the company's in-house laboratory.

In order to make sure that if it says Hoffmann's on it, there is also Hoffmann's in it, Hoffmann Dental Manufaktur was the first branded company in the dental industry to introduce product packaging with tamper-proof features. The combination of a traditional look and feel and modern standards was honoured with an award in the scope of the 9th International Corporate Design Award in 2005.

The employees' wealth of experience and the quality awareness of every individual are the motor for the continuous further development of the high standards of quality of this family enterprise.

Hoffmann's products are CE compliant, FDA approved and, since 2014, also certified as being Halal and Kosher. However, for Hoffmann Dental Manufaktur the adherence to statutory regulations and material standards is merely one of the minimum requirements.

DR. OTTO HOFFMANN
1854 - 1938

The Inventor of the zinc phosphate cement

Chemist, company founder, bearded creator

Today, the portrait of the ingenious inventor can be found in dental practices all over the world. But who was Otto Hoffmann?

Otto Hoffmann was born in a village at the foot of the Harz mountains in 1854 as the son of a farmer. When he was 10 years old, the family moved to Halle, where Otto attended the boarding school of the Franckesche Stiftungen after the death of his father. Despite financial hardships, he studied in Berlin and Leipzig and received his doctorate in 1878 in Würzburg. As an independent chemist, he settled in Berlin and, in addition to dyes and many other useful preparations, invented a ground-breaking product for dentistry: zinc phosphate cement. From 1892 onwards, the innovative cement spread from Berlin all over the world.

Otto Hoffmann also liked to travel. In 1900 he visited the World Exhibition in Paris, and Spitsbergen in 1903. But he was not only attracted by far-away places. In fact, ever increasing heights also fascinated him.

As a member of the Berliner Verein für Luftschifffahrt (Berlin Airship Association), he was an active balloonist. And countless mountain tours took him to the highest peaks of the Alps.

Perhaps it was the beard that made him so irresistible? At a ball of the Berlin Alpine Club in 1904 Otto met the love of his life, Lucie, who was 28 years younger than him. He then founded a family with her and built a house in Grunewald.

However, his work remained Otto Hoffmann's elixir of life, and he continued his vocation as a chemist until he was 83 years old.

His work as a pioneer in the dental industry lives on today, not least in the products bearing his name: Hoffmann's.

Read the series
HOFFMANN´S Tales
the true story of the inventor.
Free ordering see page 72.

Eigentum des Kaiserlichen Patentamts. Eingefügt der Sammlung für Unterklasse Gruppe Nr.

KAISERLICHES PATENTAMT.

AUSGEGEBEN DEN 14. SEPTEMBER 1906.

PATENTSCHRIFT

— № 175382 —

KLASSE 30 h. GRUPPE 12.

DR. OTTO HOFFMANN IN BERLIN.

Verfahren zur Herstellung eines Zahnzements.

Patentiert im Deutschen Reiche vom 1. Juni 1904 ab.

The History of Zinc Phosphate Cement

Industrial revolution in dentistry

The disruptive events of the Industrial Revolution spurred rapid developments in medicine and dentistry. Dentistry was still a young discipline. The development of materials and treatment methods took place at the same pace and were mutually dependent. Every practicing dentist had his own laboratory. Due to a lack of suitable restorative materials dentists had to experiment with materials themselves. Many laboratories looked more like an alchemist's kitchen and many compositions were viewed rather critically by contemporaries and – from today's point of view – can only be regarded as dangerous. Contemporary sources describe how lime hydrate was extracted from ground tooth enamel of carnivorous animals and made into a "paste" with phosphoric acid. A mass called "dental kit" was described as having the following properties: "The mixture is only usable for a period of 1-2 minutes and cannot be stirred due to slight crumbling."

Only the "Cäment" recommended by the Royal Dresden dentist Augustin Rostaing in 1858 and produced by his son, the chemist Charles Sylvester Rostaing, was really usable – also known as Rostaing's Dentinagene or Rostaing's Cement Plombage. The recipe for this dentinagene was kept a closely guarded secret by the inventor duo.

One got 12 ounces of the substance after depositing 20 pounds sterling or 155 thalers – a horrendous sum at the time – with a Dresden bank. Contemporaries complained about the price and even more about the poor availability. When father and son Rostaing died in quick succession, they took the secret of its manufacture with them to their graves. Although the basic chemical substances (zinc oxide and phosphoric acid) were known, the production in a blast furnace was an impossible endeavour for the individual dentist.

Based on the basic idea of Rostaing's Dentinagene, it was only the chemist Otto Hoffmann who succeeded in developing a high-quality dental cement after countless trials. He could produce it reliably and cost-effectively on an industrial scale. After leading dentists in America, Germany and Austria had approved the cement, the first 100 portions of the cement developed by Otto Hoffmann were officially launched on 12 February 1892.

COPPER

A powerful trace element that protects

Copper was the first metal that humans learned to form, approximately 10,000 years ago in the Neolithic Age. The word itself is derived from the Latin cuprum (aes cuprium), and refers to the island of Cyprus as a centre of copper mining in the ancient world.

The germicidal (bactericidal) effect of copper was known in the ancient world. The ancient Egyptians used copper for sterilizing drinking water, and Hippocrates of Kos described the treatment of open wounds with copper in his writings.

Today, the bactericidal effect of copper can not only be proven, but also explained. As with silver, it has to do with the so-called oligodynamic effect: Copper ions cause a disruption of the bacterial metabolism and a degeneration of the DNA. And in fact, copper, unlike silver, even has the property of regenerating itself, therefore providing a permanently bactericidal effect.

Furthermore, copper is also one of the essential trace elements required by the human organism. According to the German Society for Nutrition, the recommended daily amount is between 1 and 1.5 milligrams. For example, ten grams of chocolate would cover the daily needs.

Protective healing cement

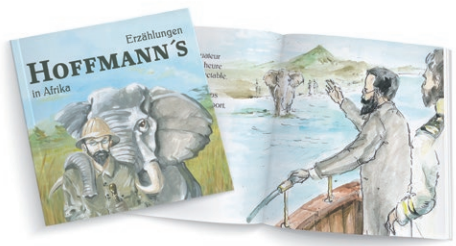
Copper-containing alloys have been used successfully in dentistry for decades. They provide long-lasting restorative care and very good protection against secondary caries.

Phosphate cements with the addition of copper have been protecting against secondary caries for more than a century. Already in 1977 Gottfried Schmalz proved that copper cements inhibit bacterial growth more strongly than corresponding copper-free materials.

The advantage is achieved by a constant release of copper ions, which has a long lasting effect on the vicinity of the treated tooth.

Milk teeth are the traditional areas of application for copper ion cements. By using copal varnish the protective effect can be doubled – mechanically and chemically.

A relatively new area of application is the cementation of crowns and bridges on implants to protect against peri-implantitis.



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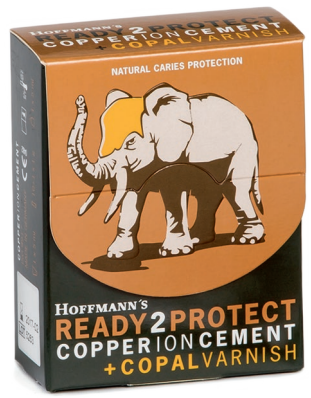


Agathis Australis

Copal

Young amber to protect the pulp

The name "copal" has become something of a collective term for fossil and recent resins of varying characteristics and botanical origins. Copalli is a loan word from Nahuatl, the ancient Aztec language, with which the Native Americans described smoked resin, which was sacrificed to Gods on their altars. Optically, copal is quite similar to amber and can sometimes contain trapped insects or other small creatures, which makes it therefore a popular collector's item. Copal can be almost colourless and transparent or take on a lush yellow to red-brown tone.

Fossil copals can be found in almost all parts of the world, in deposits a few meters under the ground. They can be thousands of years old, but are still rather young in comparison to amber, which can be several million years old. These natural resins originate from the damaged bark of conifers or leguminous (pulse) plants. Copals are usually described according to their origin, such as Zanzibar Copal or Manila Copal, and only sometimes according to the plant from which they originate, such as Kauri Copal, named after the New Zealand kauri fruit (agathis australis). East African copals are said to be the ones with the highest quality, as their characteristics come closest to those of amber. Fossil resins, also known as mature copals, are hard, hardly soluble and difficult to melt. Recently extracted copals, such as tree copal, which is directly harvested from trees as fresh resin, are much more important for industrial processing.

At the beginning of the 20th Century, thousands of tons of copal were transported to Europe for the production of varnishes, where the hardest copals were used to make the most resistant varnishes. Today, however, mainly synthetic materials are used in the varnish industry. Copals, like natural resins in general, are today only used in cases where old techniques are implemented (especially in painting) or where environmentally friendly materials are needed (such as linoleum manufacturing).

The copals used by Hoffmann Dental Manufaktur for the varnish with the same name, are recently obtained copals from Indonesia. Copal is liquefied with ethanol and receives a lighter or darker colour according to its colour composition, similar to a Single Malt Whisky.

Copal is used for the production of thermoplastic impression compounds, and gives the products their typical shine and firmness. Copal varnish particularly serves as a cavity varnish to protect the pulp.

Propolis

Propolis

Antibiotic of bees

Propolis is used by bees to protect the bee colony from diseases. They use it to seal openings and to isolate foreign matter that has been introduced into the hive. The name of the honey-yellow, sweet-smelling bee resin comes from the Greek words for «before» and «city», thus describing the protective function that propolis has for the beehive.

For the most part propolis consists of pollen balm and natural resin, which young worker bees gather from buds and sores of birch, beech, alder and poplar trees. In the afternoon, when the sun has softened the resin, the young bees take on the resin with their mandibles and transport it back to the hive sticking to their legs. The collected propolis can be harvested if the beekeeper places a foreign body in the hive. In order to protect their habitat, the bees surround the foreign body with propolis. The foreign body and the propolis sticking to it can then be removed.

More than 300 different ingredients can be attributed to propolis, including iron, copper, selenium, essential oils, vitamin A and vitamin E. The antioxidating effect of propolis is primarily explained by the high number of esters and polyphenols, especially flavonoids. The latter are largely responsible for the immune-enhancing and anti-inflammatory properties of propolis and have been used in medicine for a long time.

Propolis is used in Hoffmann's Pulpine, Hoffmann's Pulpine NE and Hoffmann's Pulpine Mineral for caries profunda therapy and for direct pulp capping.

PROPOLIS – A NATURAL REMEDY

"Propolis is an indispensable part of my dental office."

Christine Albinger-Voigt

A miracle of nature

In summer, up to 60,000 bees live in a beehive in a very confined space. During the incubation period, the temperature is approx. 35 °C, together with very high humidity. These are basically ideal conditions for the spread of germs – but bees have found ways to protect themselves from diseases:

They coat all surfaces of their hive with propolis. In this way they keep their innermost living space, the nursery and the pantry, germ-free. They say beehives are the most sterile places in nature. Every day more than 100,000 „landings" take place in a beehive. Bees bring not only valuable pollen and sweet nectar from the outside world, but also bacteria and fungal spores. Since the area around the flight hole is covered with propolis, the landing takes place on a decontamination mat, so to speak.

Unwanted intruders (even mice!) are killed by bees with bee venom. If they then cannot remove these from the hive because of their size, they are covered with a propolis layer. This prevents decay and rot, and the intruders are actually preserved for years.

While bacteria repeatedly develop resistance to antibiotics, there is still no resistance to the natural antibiotic of bees. The reason for this is that the composition of propolis varies. Depending on what is available in the immediate surroundings of the hive, the bees extract the propolis from the young buds and shoots of different trees and shrubs. According to which criteria bees collect propolis is still a secret that has not yet been deciphered!

In any case, their success proves them right: bees have managed to survive over 100 million years and have spread all over the planet. Similarly to the way propolis has been protecting the superorganism of bees for millions of years, it also helps the human immune system.

Effects of propolis

Propolis is therefore a valuable gift from bees – with a wide range of effects and applications. In South Korea, propolis even has its own research institute, which, interestingly enough, was a spin-off from the Institute for Nuclear Research. In the search for active substances that mitigate the effects of radioactive radiation, Korean nuclear physicians discovered propolis.

ORAL AND DENTAL APPLICATION

Due to its antibacterial and anti-inflammatory properties, propolis is an ideal active ingredient for oral and dental care.

Inflammations in mouth and throat

The disinfecting and anti-inflammatory properties of propolis are also appreciated for the treatment and relief of sore throats. Tea with honey is a popular household remedy, although it is better not to dissolve the honey in hot tea, otherwise the good ingredients (especially heat-sensitive vitamins and enzymes) are damaged. A mixture of propolis solution and honey in a ratio of 1:1 alleviates painful symptoms and reduces inflammation. In addition, the affected mucous membranes are strengthened in their protective function against invading viruses and bacteria.

Another possibility is to slowly melt 5 to 10 drops of a propolis tincture (the liquid from Hoffmann's Pulpine NE is very well suited) on a sugar cube in the mouth. Tough cookies can even take Pulpine with Eugenol for a severe sore throat.

Caries Profunda

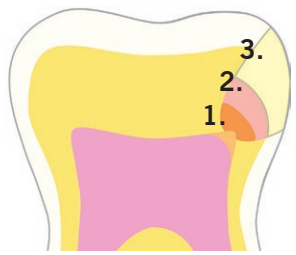
Fortunately, Caries Profunda treatments are very rare in my practice. However, if they do occur, I have been using Pulpine NE for 15 years with very good results. The preparation developed by Dr. Kaczmarek was recommended to me by my colleagues and I have been able to maintain the vitality of numerous deeply damaged teeth over the years. The positive benefit of propolis preparations in the case of Caries Profunda and open pulp is simply incomparable.

Open pulp

Pulpine NE can also be applied as a thin layer to ground tooth stumps and thus prevents grinding traumas. The pulps remain vital and the teeth do not show a negative reaction. Literature often refers to allergic reactions. However, I have not been able to detect any allergic or whole-body reactions so far.

Every patient is informed by me about the positive effects of this apitherapy before treatment. I find such an explanation important simply because the positive expectations (placebo effect!) ideally also promote healing. For me, propolis is therefore an indispensable part of my dental office!

BIOLOGICAL SANDWICH TECHNIQUE



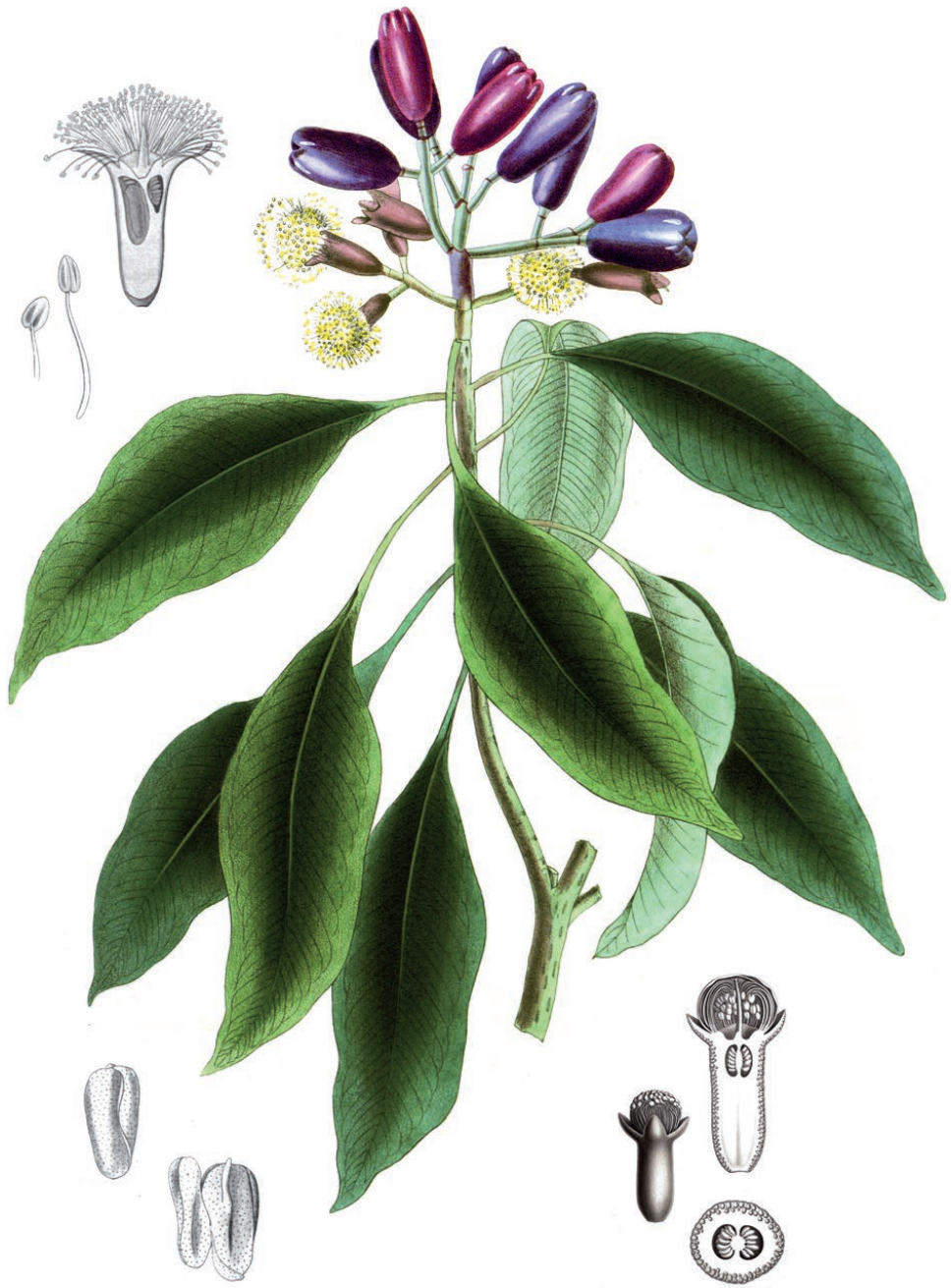
Propolis, calcium hydroxide + zinc for direct and indirect pulp capping

With zinc as dentine replacement

3. Composite

The one you trust

Christine Albinger-Voigt is a dentist and alternative practitioner with her own dental practice in Bad Homburg. As a member of professional dental societies and chairperson of the International Society for Holistic Dentistry (GZM), she is particularly committed to the creation of interdisciplinary networks through lectures and qualification measures.



Syzygium aromaticum

EUGENOL

Herba Benedicta

Hildegard von Bingen

The pharmacologically active constituent of natural clove oil is called eugenol, which is extracted from cloves. Eugenol also occurs in other plants, such as allspice, cinnamon, laurel or the real avens root (*Geum urbanum*) found in Northern Europe, however, not in similarly high concentrations.

The clove tree (*Syzygium aromaticum*) is a type of plant belonging to the myrtle family (myrtaceae), which originally comes from South-East Asia. The oldest archaeological find of cloves in ceramic vessels in Syria dates back to 1700 BC. Caravans brought the essential oil to Europe via the Incense Road. In ancient times and the Middle Ages, clove oil was considered one of the treasures vaulted by monasteries and patricians. The analgesic, antiseptic properties of clove oil have been known for centuries and are, for example, described in the writings of Galen of Pergamum (131 – 201 AD) and Hildegard von Bingen (1098 – 1179 AD). The analgesic effects against toothache, in particular, are also mentioned in the writings. Hildegard von Bingen even refers to the plant as a “herba benedicta”, a blessed herb.

Clove oil is therefore likely to be the oldest remedy for toothache, which is still today widespread in medicine chests and dental practices around the world. It is particularly often used in emergencies for temporary filling. It acts as a mild local anaesthetic, with analgesic, soothing and antibacterial properties.

Hoffmann’s uses pure essential clove oil from Indonesia in its formulation for PROXI APEX, a root canal filling material as well as for Hoffmann’s Pulpine, a biological capping material for the protection of pulp.

Palaquium gutta

Gutta-percha

A sap-giving tree

Gutta-percha is closely related to natural rubber. The main provider of this natural polyterpene or polyisoprene is gutta-percha (*Isonandra gutta*), which is found in the rain forests of Malaysia and Indonesia. Its name also comes from Malaysia: getah=rubber and percha=tree. The milky sap (latex) is usually extracted by cutting notches into the trees' bark. Procedures also exist in which gutta-percha is extracted from leaves and twigs by using specific solvents.

In the year 1843, the Englishman Montgomery came across this interesting raw material in Singapore and immediately recognized its beneficial properties. After he had brought back samples with him to England, the large-scale import to Europe began shortly afterwards. The impending extermination of the sap-giving trees was avoided by plantation cultivation. In the middle of the 19th century this natural product was favoured for the manufacture of golf balls, jewellery and decorative accessories. Due to its good insulating properties, gutta-percha was also used for decades as a coating for electric cables.

Gutta-percha already found its way into dentistry in 1847 and was used as a filling material for the first time in the USA. Originally molten lead was used for this purpose. Gutta-percha replaced lead and was used experimentally in many areas of application. For today's daily work, two forms are still of relevance: gutta-percha sticks for root canal fillings, and sealing gutta-percha for temporary sealing of cavities.

Gutta-percha has exceptional thermal isolation properties, high biocompatibility and a clinically proven antibacterial effect (bacteria find it especially difficult to attach to its surface).
The stick material is heated before use until it becomes soft and kneadable at approx. 50 °C and can then be inserted into the cavity in a thermoplastic state. Gutta-percha can then be removed relatively quickly and without having to drill.

Hoffmann's gutta-percha sticks consist of natural gutta-percha, to which zinc oxide and bees wax are added. The gutta-percha used at Hoffmann's comes from Java, is almost white and distinguishes itself through its especially high degree of purity. In order to maintain the elasticity of the material, Hoffmann's gutta-percha is sold only in re-sealable tubes.

Fucus vesiculosus and Alaria esculenta

ALGAE

Power from the sea

Algae are the oldest plants on our planet. Researchers assume a global total of more than 100,000 different species of algae. The algae filter valuable trace elements and minerals out of the sea through osmosis. Their nutrient density (amino acids, mineral salts, trace elements and vitamins) is therefore unique in the plant world.

The health-promoting active ingredients are fucoidan, which is obtained mainly from *laminaria japonica*, and alginic acid. Fucoidan plays an important role in the regeneration of tissue cells and has a strong anti-inflammatory potential. Alginic acid ensures that the cell walls of the algae are stabilized. The gel-like texture of alginic acid gives the algae intercellular strength and flexibi-lity at the same time.

The sodium alginate used is obtained from brown algae, which are particularly rich in trace elements and fucoidan. The algae have optimal adhesive properties, ideal for use in MAREFIX denture adhesive powders.

ORDER HERE

HOFFMANN´S
MAREFIX

Hoffmann's MAREFIX is a taste-neutral denture adhesive powder made from pure natural alginic acid.

AREAS OF APLICATION

- Denture stomatitis

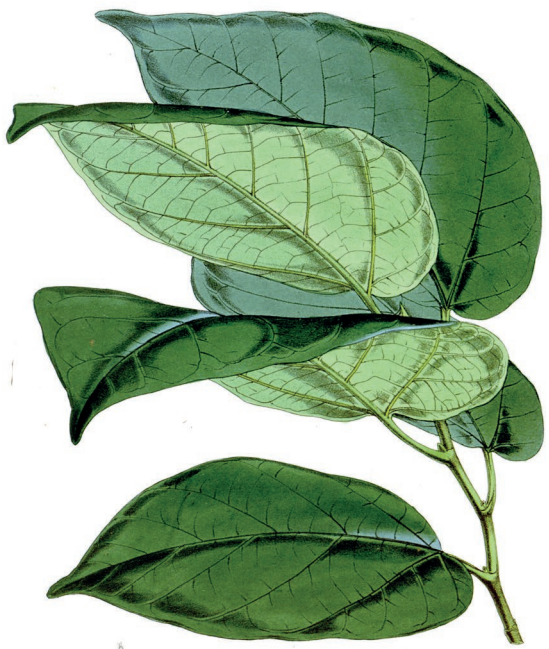
ADVANTAGES

- Very good compatibility
- Tasteless
- Stable, elastic adhesive medium
- Protects the oral mucosa from pressure points and injuries

COMPOSITION

Alginate in high pharmaceutical quality

Hoffmann's MAREFIX	
Order No.	Package size
84068	10 g powder



Kerria lacca

WATCH ▶ THE VIDEO

Video on the subject:
www.hoffmann-dental.com

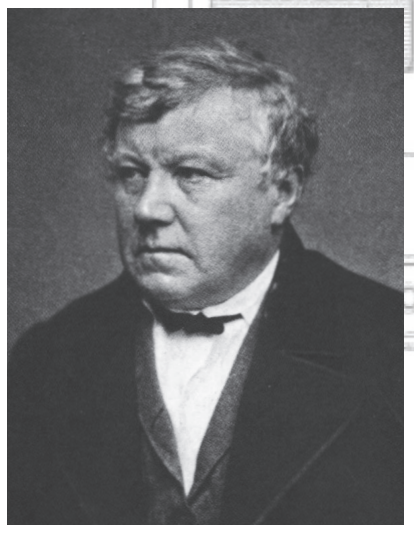
Shellac

The work of an illustrious louse

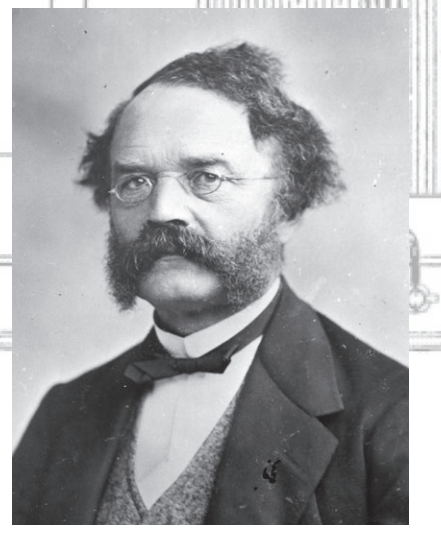
Shellac is a symbiotic product of a tree and an insect which displays natural thermoplastic properties. Shellac has been used since the 15th century (dissolved in alcohol) for the finishing of furniture and instruments. It became world-famous at the end of the 19th century when it was used to make shellac records. However, the triumph of shellac records is not only due to Emil Berliner, the inventor of the gramophone, but equally due to an insect of barely 0.5 mm length called coccus iacca kerr, the shellac louse.

The term lac comes from the Sanskrit word „lakh“ which stands for „infinitely many“. Countless shellac lice settle in huge colonies on young tree shoots, especially those of ficus religiosa and ficus indica. The females of the shellac louse create lac by processing the resin of the fresh twigs in their organism. They themselves are bit by bit covered by the resin completely and die, while 20-30 larvae will develop inside of them, which then escape as insects through holes. What remains is called seed lac, which encrusts the twigs tightly and can be harvested twice a year. The crust is removed from the twigs or branches mechanically and hot filtered through cloth. In order to produce one kilogram of shellac, one requires the metabolic products of approx. 300,000 shellac lice. Depending on the variety, this raw material is available in various colour variations from dark red and brown to yellow.

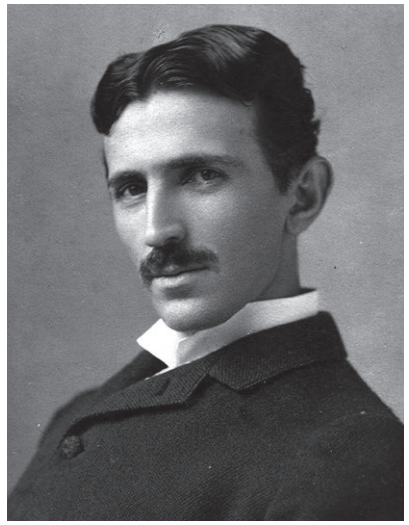
Hoffmann Dental Manufaktur uses only high-grade shellac from India. Hoffmann's base plates are produced in two different forms for upper and lower jaws. Dental technicians use them as carrier plates for model work for the setting of acrylic teeth or as a basis material for bite registration and individual/custom impression trays. Contrary to the light-curing and autopolymerizing synthetic material often used in dentistry, shellac is physiologically harmless and biologically degradable.



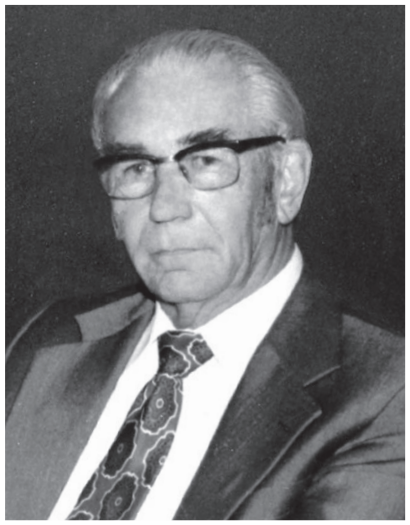
CHRISTIAN FRIEDRICH SCHÖNBEIN
1799 – 1868



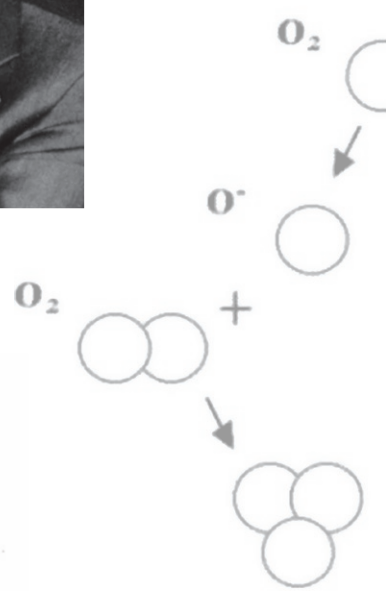
WERNER VON SIEMENS
1816 – 1892

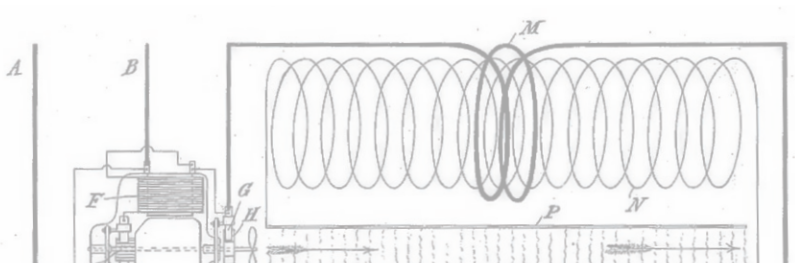


NIKOLA TESLA
1856 – 1943



JOACHIM HÄNSLER
1908 – 1981





Ozone

Nature's most effective disinfectant

Ozone – a colorless gas – is a molecule consisting of three oxygen atoms. It is the high-energy, active form of oxygen and is therefore also called "active oxygen". By supplying energy in the form of UV or electrical radiation, the oxygen is converted into ozone.

In the atmosphere, ozone is created by electrical discharge during lightning or water discharges. The ozone is responsible for the fresh and clean smell of the air that can be inhaled after a thunderstorm or near waterfalls. Ozone cleans and purifies air pollutants only for a short time, however, because it quickly converts back to normal oxygen. At the same time, this is an important advantage, as it literally accomplishes its task in a flash.

Science owes its discovery to an extraordinary German physicist and chemist, Christian Friedrich Schönbein, who discovered the gas in 1839 and named it „ozone" after the Greek word for „smelling", „ózon".

Due to its instability, ozone cannot be stored for long periods of time or purchased in cylinders like other industrial gases. Before it can be used, it must be produced on site. There are different methods of generation. The first industrial ozone generators were developed by Werner von Siemens and Nikola Tesla.

OZONE IN MEDICINE

Ozone is one of the most effective disinfectants and works even in very low concentrations in a relatively short time. Because of its high oxidation potential, ozone oxidizes the cellular components of bacteria cell walls and penetrates the cell. Once it has penetrated, it oxidizes all essential components, thus damaging the membrane and killing off the cell. In addition to this bactericidal and viricidal effect, ozone also has sporicidal, fungicidal and protozoicidal properties.

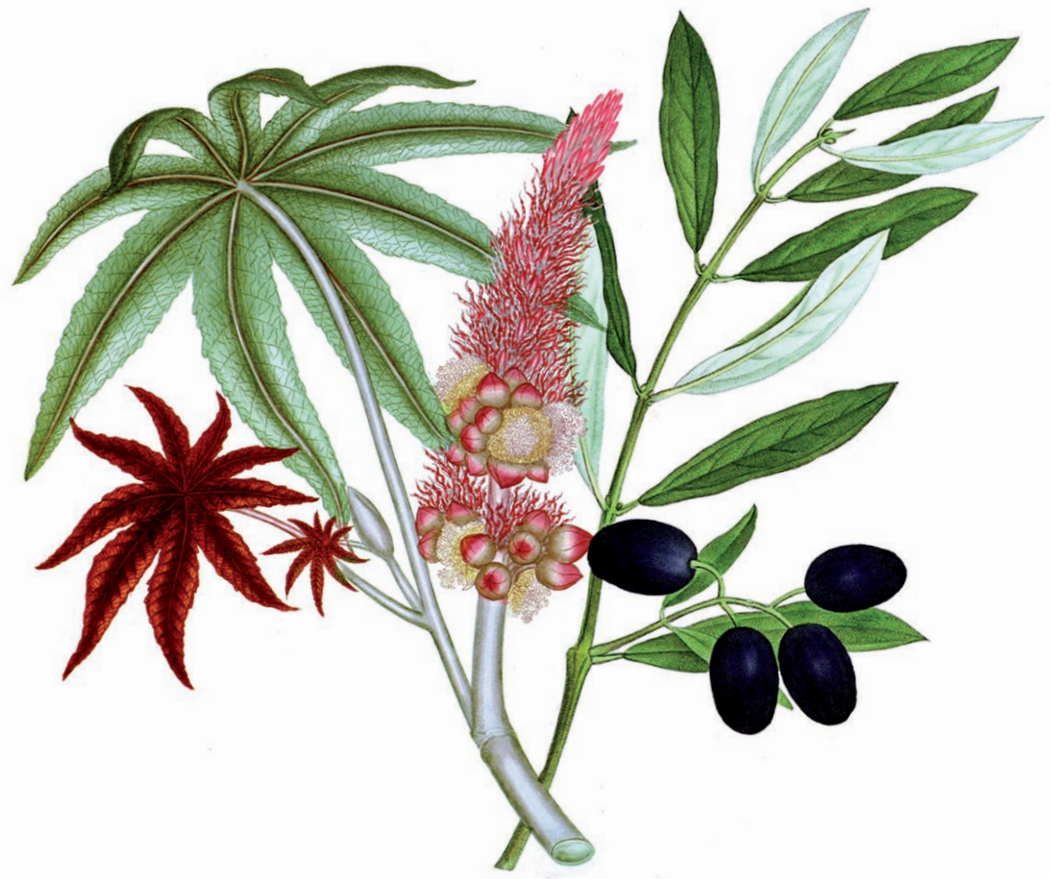
Thanks to these properties, ozone has a firm place in preventive medicine, especially when it comes to the quality assurance of drinking water. Soon after its discovery, the gas established itself in medicine and is now used for the treatment of wounds, ulcers, burns as well as for the promotion of tissue healing and regeneration.

Already in 1920, A. Wolff used ozone water in the field of dentistry. Based on that, E. A. Fisch used ozone water in 1934 for the treatment of inflammatory changes. Joachim Hänsler then developed devices for ozone oxygen production for the medical sector.

OZONIZED OILS

Ozonized oils can even be applied by patients at home if the instructions of the treating dentist are strictly followed. The amount of ozone used is taken into account both in the dental practice and at home and adapted to the clinical situation and development. The long shelf life (when cooled) of ozonized vegetable oils as well as their effectiveness make them particularly suitable for use in the dental practice as well as at home.

Ricinus communis and olea europaea



"Let food be thy medicine
and medicine be thy food."

Hippocrates

Olive Oil

The oldest remedy in the world

Olive oil is obtained from the fruit of Olea Europaea and consists mostly of monounsaturated oleic acid, and to a lesser extent of linoleic acid and palmitic acid.

Mainly two polyphenol antioxidants are responsible for the health-promoting benefits: oleuropein and oleocanthal. Thanks to oleuropein the olive tree is able to make free radicals harmless and counteract the pathogenesis of diseases. Oleuropein stimulates the immune system and slows the aging process of the olive tree. Oleocanthal is an analgesic aldehyde. This blocks the production of neurotransmitters, which are responsible for inflammatory reactions.

The polyphenols in the olive oil, like other antioxidants, have an anti-inflammatory and health-promoting effect.

Additionally, vitamin E and squalane stimulate the cell renewal and prevent irritated skin with an impaired barrier function. Olive oil has particularly a positive effect on the gums and oral health. It helps to prevent bleeding of the gums and eliminates bacteria nested in the gingival sulcus.

Castor Oil

Healthy miracle

Ricinus oil is obtained from the seeds of ricinus communis, also known as the miracle tree. The medicinal plant, which is at home throughout the Mediterranean and wide-spread as an ornamental shrub, is already mentioned in the Old Testament: "God let the ricinus plant grow over Jonah for shady protection."

The seeds contain an extremely toxic ricin which is completely removed due to the pressing. Castor oil consists of 87 % glycerides and ricinoleic acid. In addition, the oil has low levels of linoleic, palmitic and stearic acid. Castor oil is especially known for its high content of tocopherol (vitamin E). In contrast to the olive oil (α-tocopherol), however, castor oil is dominated by γ- and δ-tocopherols. Both act as free radical scavengers and serve significantly as an antioxidant. The use of castor oil to combat pathogenic anaerobic bacteria in the oral flora has been proven.

Hoffmann's $PeriO_3$ Oil provides ozonated castor and olive oil for the treatment of diseases or injuries of the gums. The restoration of a healthy oral flora is promoted.

The powerful alternative
to Chlorhexidine

ORDER HERE

for dental
professionals

HOFFMANN'S PERIO$_3$ Oil

Natural gum thearapeutic agent based on ozonized olive oil and castor oil

AREAS OF APLICATION

- Acute and chronic gingivitis
- Periimplantitis
- Stomatitis
- Periodontitis
- Cheilitis
- After professional tooth cleaning

ADVANTAGES

- Natural preparation
- Balances the oral microbiome
- Plaque retardant
- 48 hours of oxygen release
- Without antibiotics
- Without added cortisone

HOW IT WORKS

Highly reactive ozonides are formed by the incorporation of ozone in natural oils. Unlike ozone gas, they are released slowly over a period of up to 48 hours. Anaerobic bateria are selectively eliminated and the oral flora regains its natural equilibrium. The use of chlorhexidine or antibiotics can be avoided or significantly reduced.

Hoffmann's PeriO$_3$ Oil	
Order No.	Package size
84047	3 ml gel

COMPOSITION

Ozone-enriched olive oil and castor oil

BACTERIA-TIGHT SEAL WITH PERIO$_3$OIL

"Some solutions are simple but ingenious"

PROF. DR. ÇETIN SEVÜK

Prof. Dr. Çetin Sevük is an expert in prosthetics and implantology with decades of experience. In addition to his clinical work in his private clinic in Istanbul, he is active in several associations and aca-demies and currently holds the position of President of Turkish Society for Prosthetics and Implantology.

Professor Sevük's advice for an osseointegration without complication

- One drop Hoffmann's PeriO$_3$ Oil is dripped into the screw gap (Fig. 1) after placement of the implant screw
- A quantity of PeriO$_3$ Oil is applied around the implant to seal the mucosa.
- Any sutured area is also covered with a thin layer of PeriO$_3$ Oil.
- Hoffmann's PeriO$_3$ Oil is applied to the implant screw gap after completion of the osseointegration
- A quantity of PeriO$_3$ Oil is applied to the surrounding tissue during insertion of the gingiva former and during the impression taking stages

Fig. 1

Biological gentle gingivitis therapy

for lay users

ORDER HERE

HOFFMANN'S GINGIVA FIT

AREAS OF APPLICATION

- Supports the treatment of inflammation and irritation of the oral mucosa and gums
- Supports the treatment of periodontitis
- After professional tooth cleaning and after curettage
- Inhibition of plaque formation by physical wetting of teeth and gums

MECHANISM – HOW IT WORKS

Gingiva Fit is produced by sparging ozone-oxygen through natural oils for several days thus forming ozonides. In the mouth the ozonides from the oil are slowly released over a period of 48 hours. Anaerobic bacteria are targeted and selectively reduced. The natural oils groom and stimulate the oral flora so that it can regain her natural healthy equilibrium.

Hoffmann's GINGIVA FIT	
Order No.	Package size
84048	1 ml gel

ADVANTAGES

- Natural product
- Conservation of oral flora
- Plaque inhibition
- Long duration of action
- Without antibiotics
- Without cortisone

Healthy pregnancy

COMPOSITION

Ozone-enriched olive oil and castor oil

BIOLOGICAL PERIODONTITIS THERAPY AT HOME

"Our patients prefer Gingiva Fit over Chlorhexidine for home use"

PROF. DR. GLORIA SÁNCHEZ SABORIDO

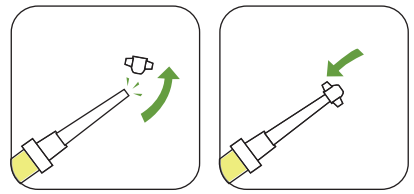
Master of Implantology, Prosthetics and Periimplantology
UNIVERSITY ALFONSO X EL SABIO
Madrid, Spain

In all cases treated, a decrease in depth of penetration, inflammation, plaque index and bleeding index was observed. In the re-evaluations that we have carried out after scaling and root planing, we have collected impressions of patients regarding the use of Hoffmann's Gingiva Fit. All had previous experience with Chlorhexidine as a treatment adjuvant. In comparison with this antiseptic product they reported following perceptions:

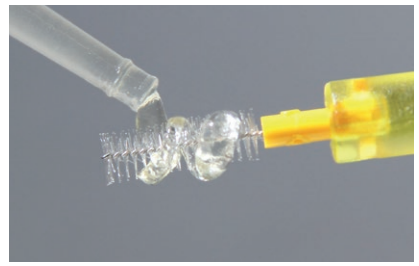
- Absence of stinging/burning after gel application,
- Absence of metallic taste or alteration of taste,
- Absence of stains on the teeth,
- Shorter treatment time than with Chlorhexidine

Our patients prefer Gingiva Fit to Chlorhexidine for home use.

With practical resealable application cannula for home use.



Patients can apply Gingiva Fit to an interdental brush to access interdental spaces.



RENAISSANCE OF THE ZINC PHOSPHATE CEMENT

POWDER REF 80012-(c)

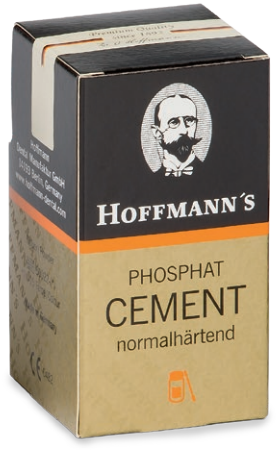
LIQUID REF 8001300

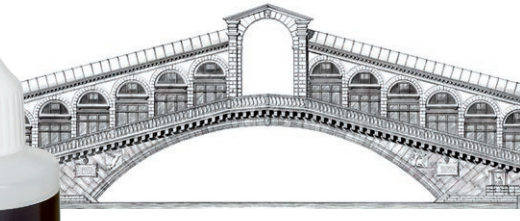
SET REF 80015-(c)

POWDER REF 80022-(c)

LIQUID REF 8002300

SET REF 80025-(c)





Optimum granulometry for luting of zirconia crowns and bridges

HOFFMANN‘S ZINC PHOSPHATE CEMENT – QUICK

AREAS OF APLICATION

- Lining for all filling materials (amalgam, composites)
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal as well as metal ceramic and all-ceramic (zirconium oxide, aluminium oxide and lithium disilicate ceramic)
- Cementation of implant-supported crowns and bridges
- Cementation of orthodontic bands
- Cementation of retention pins and screws
- Core build-ups
- Long-term temporary fillings

ADVANTAGES

- Dimensionally stable – no shrinkage and therefore no formation of marginal gaps
- Excellent micromechanical adhesion
- Wide range of applications from A like amalgam to Z like zirconia
- Very easy removal of excess material
- Extremely low pulp toxicity
- Hypoallergenic
- More than 127 years of clinical experience

COMPOSITION

Powder: zinc oxide, magnesium oxide
Cement liquid: o-phosphoric acid

PHOSPHATE CEMENT – quick		
Order No.	Package size	Colour
80012-(Colour)	1 x 100 g powder	01-15
8001300	1 x 30 ml liqiud	---
80015-(Colour)	1 x 30 g powder 1 x 15 ml liqiud	01-15

PHOSPHATE CEMENT – normal		
Order No.	Package size	Colour
80022-(Colour)	1 x 100 g powder	01-15
8002300	1 x 30 ml liqiud	---
80025-(Colour)	1 x 30 g powder 1 x 15 ml liqiud	01-15

HOFFMANN‘S ZINC PHOSPHATE CEMENT – NORMAL

OVERVIEW OF TIMES

Times (min)

Areas of application	Phosphate Cement quick		
	Mixing time	Processing time	Setting time
Luting	1:30	2:30	3:00 – 5:30
Lining	1:30	2:00	2:30 – 4:00

Areas of application	Phosphate Cement normal		
	Mixing time	Processing time	Setting time
Luting	1:30	3:00	5:00 – 7:30
Lining	1:30	2:30	3:30 – 5:30

Zn

ZINC

Hoffmann‘s zinc-phosphate-based cements replace lost dentin and additionally protect the pulp from thermal and biochemical stress.

- Remineralizing effect
- Demonstrably better than fluoride
- Protection against free radicals

Mixing technique

A crown or bridge luted with Hoffmann's phosphate cement will be able to stay in a patient's mouth for decades. However, ideal success is only achieved if the cement is processed carefully. The two components, consisting of powder and liquid, are mixed together per hand.

This gives you a number of advantages, as the working time, amount and consistency can be individually adapted to the task at hand.

Hoffmann's provides two different dosage forms: the classic version in bottles for free-hand dispensing, and pre-dosed as READY2MIX in stick packs and fluid tubes.

Due to the exothermic reaction during the mixing procedure, the powder is always applied to the liquid in portions.

Classic mixing by hand

For classic mixing, one divides the powder into four different portions (1/8, 1/8, 1/4, 1/2). Starting with the smallest amount, the portions are mixed into the liquid one after the other with the spatula. The mass should be smoothed out across the slab every now and again, in order to allow the reaction warmth to escape well. A total of 90 seconds is needed for the mixing process.

The most difficult but also the most important part is to determine the amount of powder which is to be put into the liquid. As a rule of thumb, a surplus of liquid should be avoided and the mixture should contain ample powder.

Consistency control - Checkmark test method

The powder saturation is determined optically by means of the so-called checkmark test. To do so, a tip of material is pulled out of the mass with a spatula. If no tip can be pulled out or if the cement should even drip from the spatula, then powder will definitely have to be added.

Lining (Fig. 1)

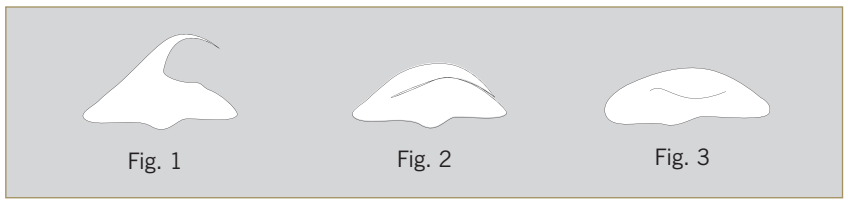
The correct lining consistency is achieved if the formed tip can be bent back into a hook, like a checkmark, and does not sink back into the mass.

Luting

The correct luting consistency is achieved if the pulled out tip slowly sinks back into the mass. (Fig. 3) If it sinks back too fast, the mixture can be adapted by adding a little more powder. If it does not sink back, but remains on the mass, (Fig. 2) then the consistency is too thick. In such a case, one should start mixing anew, as no more liquid should be added after mixing.

Note

The cement should not be mixed any thinner for the luting of complicated cases that might require more time, as this might cause it to lose its stability. In such cases, instead of quick hardening cement, one can use normal hardening cement which provides a longer working time.



WATCH ▶ THE VIDEO

Video on the topic:

Non-toxic bonding

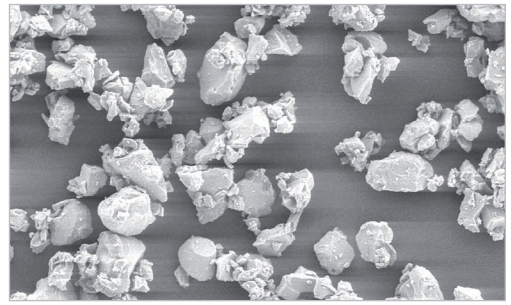
The ancient Romans knew that only sand from rivers was suitable for the construction of houses. The least suitable is desert sand, the grains of which have been rounded through the strong winds.

Powder and liquid of the phosphate cement essentially consist of zinc oxide and phosphoric acid. Zinc oxide is a component of wound creams for babies, phosphoric acid can be found in the most popular soft drink in the world: Coke.

The chemical components of phosphate cement are purely inorganic. The individual components are very well tolerated, which is also true for the end product. Zinc oxide and phosphoric acid react with each other and form a crystal, which is called hopeite:

$$3\ ZnO + 2\ H_3PO_4 + H_2O \rightarrow Zn_3(PO_4)_2 \cdot 4\ H_2O$$

The more powder is kneaded in, the more hopeite crystals are formed and the more favourable the cement's properties will become. The actual amount of hopeite crystals also has an effect on the solubility of the cement.



REM x 1000 magnification (Hoffmann's Cement, powder)

MICROMECHANICAL BONDING

The adhesion of the phosphate cement occurs micromechanically. On the one hand, it is important that the tooth is prepared accordingly. Literature generally states an optimum preparation angle of 6°. On the other hand, the restoration should have a certain surface roughness.

An optimal particle size distribution ensures the best micromechanical properties of the cement. The distribution ideally follows a normal distribution with smaller and larger particles in the range of up to 25 microns. Additionally the surface roughness of the cement particles is another factor. Grinded particles without any roughness will not provide adhesion.

ANGULAR POWDER PARTICLES

Hoffmann Dental Manufaktur already developed special grinder technology decades ago. The cements are ground to the right particle size in a three-stage grinding process, and under a microscope one can see that there are angular as well as sharp-edged particles.

ACIDIC PAIN?

With zinc phosphate cements, so-called acid pain can occur with sensitive patients. This is caused by the acid effect in the direct vicinity of the pulp through nerve irritation. It has nothing to do with the warmth caused by the cement's reaction and immediately dissipates with the curing process.

CAN BE AVOIDED

Acid pain can already be avoided by not reducing the recommended amount of powder and mixing it according to directions. In addition, the cavity can be prepared with cavity protection varnish, for example Hoffmann's Copal Varnish.

Leonardo

ORDER HERE

01	white
07	golden brown
10	greenish grey
11	blueish grey
15	pink

HOFFMANN'S LEONARDO HARMONIC SHADES

UNVERSAL GENIUS

Aesthetic bonding of zirconia and lithium-disilicate

Dentin replacement/lining

Semi-permanent aesthetic filling

TECHINCAL DATA		
	Hoffmann's	ISO standard
Setting time:	5:00 - 7:30 min	2:30 - 8:00 min.
Compressive strength:	90 - 130 MPa	50 Mpa
Film thickness:	< 20 µm	< 25 µm

HARMONIC SHADES / SET		
Order No.	Package size	Colour
82200	1 x 100 g, powder 4 x 30 g, powder	01, 07, 10, 11,15
	1 x 40 ml, cement liquid	---
	1 x 40 ml, test fluid	---

ADVANTAGES

- Low allergy potential due to
  - purely inorganic chemistry
  - mineral food colours
- Optimum granulometry ensures
  - low film thickness
  - permanently stable micromechanical adhesion
- Fitting with test fluid
  - 100 % colourfast
  - food quality
- Economical and ecological
  - no opaquer
  - no correction firing necessary

COMPOSITION

Powder: zinc oxide, magnesium oxide

Cement liquid: o-phosphoric acid

Test fluid: propane-(1,2,3)-triol

INDIVIDUAL SHADE CEMENTATION

Zinc phosphate cement has a decisive advantage especially for differently coloured tooth stumps, metallic post abutments and implant abutments – due to its opacity, it ensures an even priming and makes the translucent ceramics appear more even.

The set consists of one basic shade 01 and four strong colour shades in the direction of yellow, green, grey and red for individual shade adjustment. The cement shades are mixed individually. The colour effect of the various cements can also be determined using a digital tooth shade determination device.

Hoffmann's shades make it possible to modify the colour effect of the restoration „chair-side". The test fluid included in the set can be used to test the optimum colour effect before the crowns are definitively cemented. This is particularly important in sensitive areas, e.g. in anterior tooth restoration. The cement mass with the test fluid does not set and can simply be rinsed off with water.

IMITATION OF VITAL PULP

"Pink trick" is the expression given to cementing with a pink cement. With this trick, pulp-dead teeth, whose grey tooth stumps cloud the overall impression of the restoration, are given a lively appearance, similar to pulp with blood circulation.

Basic colour 01 + shade 15

Basic colour 01

MATCHING OF DIFFERENTLY SHADED TOOTH STUMPS

Lightening (base shade 01 / lightened shades with 01)

01 07 10 11 15

Darkening (shades 07, 10, 11)

07 10 11

Shade correction of the restoration (all shades and mixed shades)

HARMONIC SHADES / REFILLS		
Order No.	Package size	Colour
82201	1 x 100 g powder	01 white
82507	1 x 30 g, powder	07 golden braun
82510	1 x 30 g, powder	10 greenish grey
82511	1 x 30 g, powder	11 blueish grey
82515	1 x 30 g, powder	15 pink
82300	1 x 40 ml, cement liquid	---
88800	1 x 40 ml, test fluid	---

Hypoallergenic cementation for metal-free ceramics

Hoffmann's Harmonic shades
Hoffmann's PHOSPHAT CEMENT normal setting
Hoffmann's PHOSPHAT CEMENT quick setting
Hoffmann's READY2MIX
Hoffmann's READY2PROTECT Copper ion cement

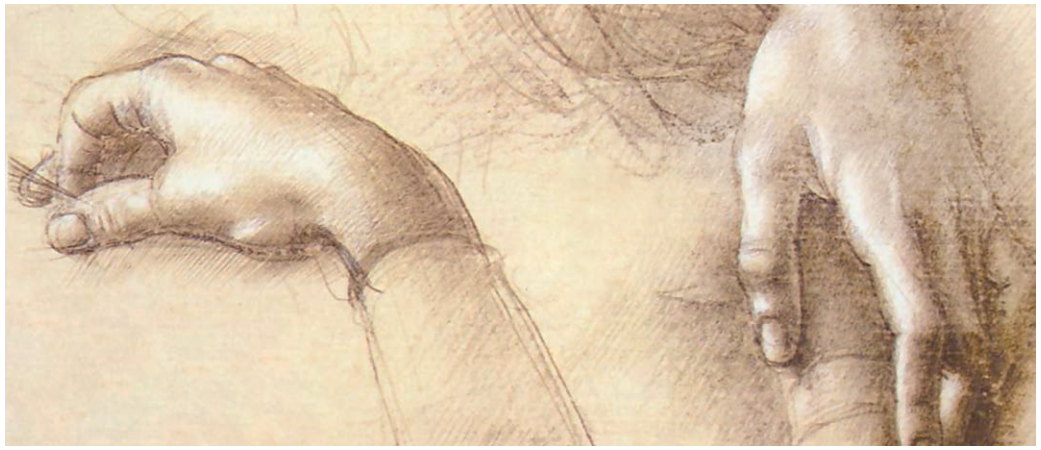
From an environmental medical point of view, they are the best choice for luting crowns and bridges made of zirconium oxide, aluminum oxide and lithium disilkat ceramic. The following table lists some well-known manufacturers and systems that are suitable for classical cementation with micro-mechanical adhesion. We update the list regularly, but make no claim to completeness.

Company	System	Name
3M ESPE AG	Lava ™	Lava ™ Zirkonoxid Lava ™ Plus hochtransluzentes Zirkonoxid
ACF GmbH	ZirLuna®	ZirLuna® ZirLuna® Sensitive
Amann Girrbach AG	ceramill®	ceramill® zolid fx classic ceramill® zolid fx preshades ceramill® zolid fx multilayer ceramill® zolid classic ceramill® zolid preshades ceramill® zi
Bien-Air GmbH	DC	DC-Zirkon® DC-Zirkon®Col DC-Leolux® DC-Procura® DC Shrink®
Bionah GmbH	BionZ	BionZ Crystal BionZ Diamond BionZ Glass BionZ Coral
CAD Esthetics AB	-	Denzir® Zirconia Magnum Zirconia Plus
DeguDent GmbH	Cercon®	Cercon®ht
Dental Direkt	DD Bio	DD Bio ZW iso (Color) DD Bio ZX², ZS, ZK DD Bio Cube X2 DD Bio ZA
Diadem SAS	-	Diazir

DOCERAM Medical Ceramics GmbH	Nacera®	Nacera® Pearl Multi-Shade Nacera® Pearl Shaded 16+2 Nacera® Standard 98 Nacera® Zirkonzahn* 95
Glidewell Laboratories	-	BruxZir® Solid Zirconia
Goldquadrat GmbH		Katana Zirconia ML Noritake Zirprime Quattro Disc Med
Ivoclar Vivadent AG	IPS e.max	IPS e.max Press IPS e.max ZirCAD IPS e.max CAD
Kavo Dental GmbH	-	Zirconia Soft
Kulzer	-	Cara Zirkon ZrST, ZrML, Zrtr Cara $LiSi_2$
Kuraray Noritake Dental Inc.	KATANA™	KATANA™ Zirconia UTML / STML KATANA™ Zirconia ML KATANA™ Zirconia HT
Metoxit AG	-	Z-CAD®HD Z-CAD®HD HTL
Nobel Biocare AG	Procera®	Procera® Zirconia Procera® Alumina
Sagemax Bioceramics Inc.	NexxZr T	NexxZr T - Transluzentes Zirkon NexxZr S - Starkes Zirkon
Sirona Dental Systems GmbH	Cerec inCoris	Cerec Blocs C Cerec Blocs C PC inCoris ZI inCoris TZI inCoris TZI C inCoris ZI meso
Vita Zahnfabrik GmbH	In-Ceram	VITA SUPRINITY® VITA YZ HT VITA YZ T VITA In-Ceram YZ VITA In-Ceram AL VITA In-Ceram SPINELL VITA In-Ceram ZIRCONIA VITA In-Ceram ALUMINA
Wieland Dental+Technik GmbH & Co. KG	Zenostar®	Zenostar® MT Zenostar® T Zenostar® MO
Zirkonzahn Worldwide	-	Prettau® Anterior® Prettau® Zirkon ICE Zirkon Translucent
Zfx Zirkon	Zfx™ Zirconium	Zfx™ Zirconium allround Zfx™ Zirconium eff ect Zfx™ Zirconium Multilayer Zfx™ Zirconium BionX2

PHOSPHATE CEMENT FOR QM SYSTEM

Single dose system acc. to MDR

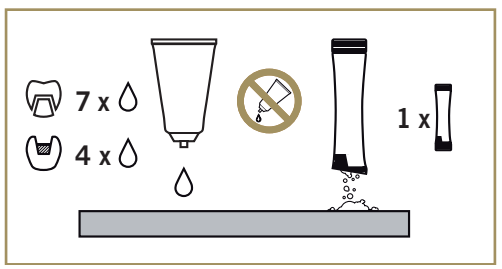


An incorrect dosage demonstrably influences the mechanical and biological properties of all dental cements. Carboxylate cements react more strongly to too little liquid. Phosphate cements do not tolerate too little powder content. Even with a dosage spoon, deviations of 30 % are not uncommon.

Single dosages guarantee standardization so that the same mixing ratio can always be achieved. In combination with the dexterity of the human hand, one and the same product can be dosed differently in order to enable flexible use – for the cementation of restorations, for core build-ups and for underfillings. READY2MIX fulfills documentation requirements for implant ID cards.

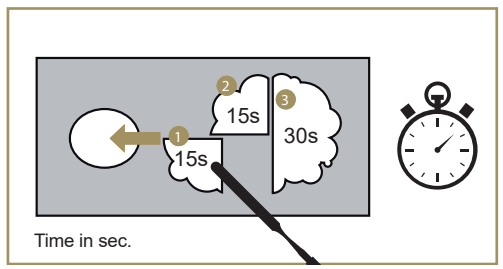
Advantages of HOFFMANN´S READY2MIX compared to manual mixing

- Always successful
- 33 % shorter mixing time
- Optimum cement properties due to exact dosing
- Hygienic, moisture-proof powder packaging



Advantages of HOFFMANN´S READY2MIX over capsule or syringe systems

- One product for luting, lining and temporary filling
- No equipment required
- Economical over capsule and syringes
- 90 % less waste
- Temperature and climate resistent



ORDER HERE

ORDER HERE

READY2MIX – ZINC PHOSPHATE CEMENT NORMAL

AREAS OF APLICATION

- Lining for all filling materials (amalgam, composites, etc.)
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal and ceramic
- Cementation of zirconium oxide, aluminium oxide and lithium disilicate ceramic
- Cementation of implant-supported crowns and bridges
- Cementation of orthodontic bands
- Cementation of retention pins and screws
- Core build-ups
- Long-term temporary fillings

COMPOSITION

Powder: zinc oxide, magnesium oxide
Cement liquid: o-phosphoric acid

COMPARED TO capsules & syringes

- One system for lining, bonding and long-term provisional filling
- Individual consistency control
- No technical equipment needed
- 90 % less waste

ADVANTAGES OF ZINC PHOSPHATE CEMENT

- No rubber dam
- Easy excess removal
- Low pulp toxicity
- Recommended for allergy sufferers

8002355	Stick 5 x 1 g powder Tube 1 x 3 ml liquid	03

Zink polycarboxylate cement for luting and lining

POWDER REF 80312-(c)

LIQUID REF 8031300

SET REF 80315-(c)

HOFFMANN'S CARBOXYLATE CEMENT

AREAS OF APPLICATION

- Lining for all filling materials (amalgam, composites)
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal and ceramic
- Cementation of orthodontic bands
- Cementation of retention pins and screws
- Core build-ups
- Long-term temporary fillings
- Fillings in deciduous teeth

ADVANTAGES

- No acid pain
- For sensitive tooth stumps
- Easy to use
- No etching, priming, bonding
- Compressive strength well above the material standard
- Chemical adhesion

SETTING TIME FROM END OF MIXING:

For cementation: 3 - 4 minutes
For cavity linings: 2 - 3 minutes

CARBOXYLATE CEMENT		
Order No.	Package size	Colour
80312-(Colour)	1 x 100 g powder	01-15
8031300	1 x 40 ml liquid	---
80315-(Colour)	1 x 30 g powder 1 x 15 ml liquid	01-15

COMPOSITION

Powder: zinc oxide, magnesium oxide
Liquid: polyacrylic acid

ORDER HERE

Universal phosphate cement powder for use with 3 different liquids

HOFFMANN´S UNIVERSAL CEMENT – ONE FOR ALL

AREAS OF APLICATION depending on used liquid

- Lining for all filling materials (amalgam, composites, etc.)
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal and ceramic
- Cementation of zirconium oxide, aluminium oxide and lithium disilicate ceramic
- Cementation of implant-supported crowns and bridges
- Cementation of orthodontic bands
- Cementation of retention pins and screws
- Core build-ups
- Long-term temporary fillings
- Fillings in deciduous teeth

ADVANTAGES OF

UNIVERSAL CEMENT		
Order No.	Package size	Colour
80032-(colour)	1 x 100 g powder	01-15

UNIVERSAL CEMENT

- Can be combined with three different cement liquids
- A retail favourite, as it requires only one shelf space

COMPOSITION

Powder: zinc oxide, magnesium oxide
Cement liquid: o-phosphoric acid

"Since bonding with
Hoffmann's READY2PROTECT,
no cases of periimplantitis occurred."

DR. NICOLA MINOTTI
Dentist, Geneva

Luting cement for implants

CEMENT4IMPLANT – COPPER ION CEMENT

AREAS OF APPLICATION

- Permanent cementation of implant-supported crowns and bridges
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal and ceramic
- Bonding of restorations made of zirconium oxide, aluminium oxide as well as lithium disilicate ceramic
- Cementation of orthodontic bands
- Cementation of retention pins and screws

ADVANTAGES

- Bacteria-proof closure
- Slow release of copper ions
- Pure micromechanical bonding
- If necessary, the restoration can be removed with an ultrasonic scaler
- X-ray visible for easy follow-up
- Easy excess removal
- Particularly well tolerated

READY2PROTECT CEMENT4IMPLANT		
Order No.	Package size	Colour
8007010	Stick 10 x 1 g powder Tube 1 x 5 ml liquid	---

COMPOSITION

Powder: zinc oxide, magnesium oxide, copper salts
Cement liquid: o-phosphoric acid

ORDER HERE

POWDER REF 8072203

LIQUID REF 8072300

SET REF 8072403

Phosphate cement with copper additive

HOFFMANN'S COPPER CEMENT

AREAS OF APPLICATION

- Fillings in deciduous teeth
- Lining for all filling materials (amalgam, composites)
- Cementation of inlays, onlays, crowns and bridges made of precious metal, non-precious metal as well as metal ceramic and all-ceramic (zirconium oxide, aluminium oxide and lithium disilicate ceramic)
- Cementation of implant-supported crowns and bridges
- Cementation of orthodontic bands
- Cementation of retention pins and screws
- Core build-ups
- Long-term temporary fillings

ADVANTAGES

- Dimensionally stable – no shrinkage and therefore no formation of marginal gaps
- Slow release of copper ions
- Very easy removal of excess material
- Low risk of allergic reactions

COPPER CEMENT		
Order No.	Package size	Colour
8072203	1 x 100 g powder	03
8072300	1 x 40 ml liquid	---
8072403	1 x 30 g powder 1 x 13 ml liquid	03

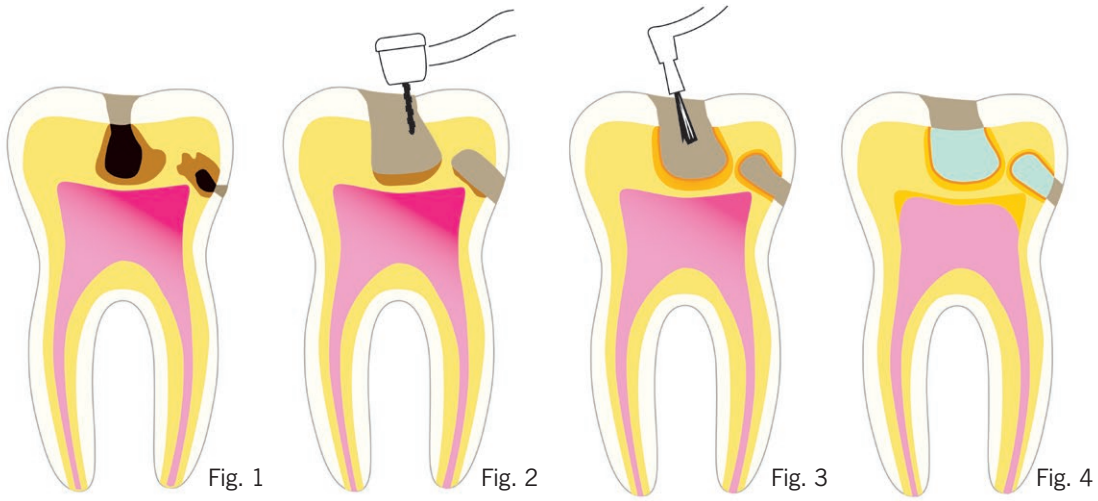
COMPOSITION

Powder: zinc oxide, magnesium oxide, copper salts
Cement liquid: o-phosphoric acid

NATURAL HEALING CEMENT WITH COPPER IONS

Minimal invasive protocol

The protocol described below was developed by Dr. Jean-Pierre Eudier, Luxembourg, and Dr. Nicola Minotti, Switzerland. It describes a minimally invasive method for CP excavation and indirect pulp capping using zinc oxyphosphate cement with copper ions.



1. Caries Profunda with initial (reversible) pulpitis (Fig. 1)

2. Atraumatic Preparation of the cavity (Fig. 2)
   The cavity is carefully prepared, carious tissue is removed from the cavity walls. A layer of demineralized dentin is left on the pulp horn to avoid pulp opening.

3. Application of a copper and copal barrier (Fig. 3)
   Copal varnish mixed with a pinch of copper ion cement powder is used as a liner. The ionized copal varnish is applied on the demineralised dentin. Copper ions are transported into the dentin tubuli and the tubuli are sealed.

4. Mechanical copper ion cement barrier (Fig. 4)
   Lost dentin is replaced with a powder rich mixture of copper ion cement. The cement can be used as a long term temporary filling. However a sustainable solution requires an enamel replacement with either gold or full ceramic. If budget restrictions prevent a sustainable restoration there are two other options: an amalgam rich in copper or a composite based filling (preferably a classic etch & bond system without TEGDMA and HEMA).

ORDER HERE

„These cements are easy to use, economical and have a strong therapeutic potential. Nowadays they are unrivalled and very reliable.“

DR. DANIEL BANDON
(Lecturer, University of Marseille, Faculty of Paediatric Dentistry)

Natural healing cement with copal and copper

READY2PROTECT COPPER ION CEMENT + COPAL VARNISH

SET

AREAS OF APPLICATION

- Preservation of vital teeth also with deep caries in combination with Hoffmann's Copal Varnish using a copper barrier
- Minimal invasive caries treatment with modified ART technique
- Fillings in deciduous teeth
- Long-term temporary fillings, saliva-proof
- Lining for all types of teeth (also for vital teeth)
- Lining for all filling materials (composites and amalgam)
- Core build-ups

HOW IT WORKS

- The copal varnish infiltrates the dentin tubules and thus transports copper ions into the demineralized dentin. The tooth pulp is supported in its primary function, so self-healing powers are activated.
- Missing dentin is replaced with READY2PROTECT. The cement layer forms a permanent barrier against secondary caries.

WATCH ▶ THE VIDEO

Film on the topic
www.hoffmann-dental.com

READY2PROTECT Pocket + Copal		
Order No.	Package size	Colour
8007020	Stick 11 x 1 g powder Tube 1 x 5 ml liquid Bottle 1 x 5 ml copal varnish	---

COMPOSITION

Powder: zinc oxide, magnesium oxide, copper salts
Cement liquid: o-phosphoric acid
Copal varnish: copal, ethanol

POWDER REF 84016

LIQUID REF 84017

Pulp capping material with eugenol and propolis

HOFFMANN'S PULPINE

AREAS OF APPLICATION

- Caries profunda, indirect pulp capping
- Direct pulp capping, always without pulpitis

HOW IT WORKS

The matrix with eugenol and propolis sets quickly and limits the possible side effects of alkaline calcium hydroxide, such as permanent stimulus or uncontrolled necrosis. The properties of propolis (bee resin) supplement the properties possessed by calcium hydroxide and help the pulp to heal. Very good biocompatibility. Relieves pain.

ADVANTAGES

- Biocompatible pulp capping alternative with propolis
- Controlled neutralization of calcium hydroxide
- Easy application
- Quick and complete setting
- Pain-relieving

CONTRAINDICATION

Do not use if you are allergic to eugenol and/or bee products.

SETTING TIME:

1:00 - 3:45 minutes

Hoffmann's PULPINE	
Order No.	Package size
84016	10 g powder
84017	10 ml liquid

COMPOSITION

Powder: calcium compounds, zinc compounds
Liquid: ethanol, eugenol, propolis

POWDER REF 84078

LIQUID REF 84077

Hydroxyapatite and propolis-containing pulp capping material as an alternative to MTA

HOFFMANN'S PULPINE MINERAL

AREAS OF APPLICATION

- Caries profunda, indirect pulp capping
- Indirect pulp capping with reversible pulpitis
- Direct pulp capping, always without pulpitis
- Direct and indirect pulp capping after crown preparations

HOW IT WORKS

Hydroxyapatite, which forms about 70 % of natural dentin, is embedded in the composite of calcium hydroxide and propolis. It forms a very stable setting matrix without gaps and without necrosis formation. The properties of propolis lead to a complication-free healing of infected pulp tissue.

ADVANTAGES

- Supports healing
- No necrosis formation
- Easy application
- Very good adhesion
- Quick setting

CONTRAINDICATION

Do not use if you are allergic to eugenol and/or bee products.

SETTING TIME:

1:00 - 3:30 minutes

Hoffmann's PULPINE MINERAL	
Order No.	Package size
84078	5 g powder
84077	10 ml liquid

COMPOSITION

Powder: calcium compounds, hydroxyapatite
Liquid: ethanol, propolis

POWDER REF 84086

LIQUID REF 84087

Hydraulic repair cement w– the alternative to MTA

HOFFMANN'S ENDO REPAIR

AREAS OF APPLICATION

- Vital extraction of deciduous teeth
- Perforation of the root canal
- Incomplete root growth, root filling
- Over-instrumentation of apex

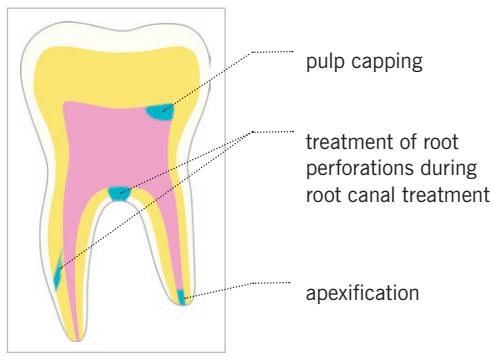
ADVANTAGES

- Pure calcium phosphate matrix
- No necrosis formation
- Easy application
- Quick and complete setting

HOW IT WORKS

The bone- or tooth-like matrix ensures maximum bio-compatibility. Necrosis can be prevented and there is an almost asymptomatic healing of the pulp under the stable artificial bone layer.

SETTING TIME: 0:30 - 2:30 minutes



Hoffmann's ENDO REPAIR	
Order No.	Package size
84086	3,5 g powder
84087	10 ml liquid

COMPOSITION

Powder: calcium phosphates, hydroxyapatite
Liquid: distilled water (without preservatives)

INDICATION TABLE

AREAS OF APPLICATION	PULPINE	PULPINE NE	PULPINE MINERAL	ENDO REPAIR	ENDO ABSORB	ENDO ABSORB PLUS	PROXI APEX	READY2PROTECT + Copal
Caries profunda [indirect pulp capping]	+++	+++	+++	++				++++
Indirect pulp capping with reversible pulpitis	++++	+++	+++					++++
Direct pulp capping [always without pulpitis]	+	++++	+++	+++				
Indirect pulp capping [after crown preparation]	++	+++	++++	+++				
Direct pulp capping [after crown preparation]		+++	++++	+++				
Exsudate formation during root canal treatment					+++	++++		
Bleeding during root canal treatment					+++	+++		
Root filling [vital extirpation]							++	
Final root filling [after gangrene treatment]							++	
Vital extraction of deciduous teeth				++++				
Perforation of the root canal [temporary]				++++				
Perforation of the root canal [final]				++++				
Incomplete root growth [root filling, temporary]				++++				
Incomplete root growth [root filling, final]				++++				
Over-instrumented apex				++++				

\+ possible
++ good
+++ very good
++++ excellent

Bentonit - „Healing Clay“

POWDER REF 84040

LIQUID REF 84039

Temporary root canal therapeutic agent for the absorbtion of exudate. Radiopaque.

HOFFMANN‘S ENDO ABSORB PLUS

AREAS OF APPLICATION

- Treatment of infected root canals after pulp removal or gangrene treatment
- Treatment of exudate formation and bleeding after root canal treatment

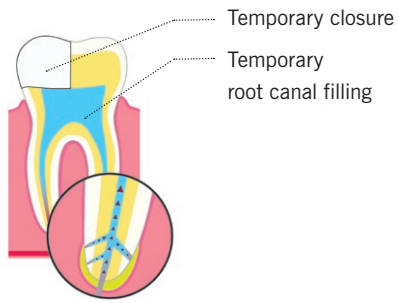
HOW IT WORKS

Temporary root canal therapeutic with a unique feature: It absorbs exudate up to an amount of 120 % of its own weight and over a period of 3 weeks. Contains calcium hydroxide. Radiopaque.

SETTING TIME: 1:00 - 4:00 minutes

ADVANTAGES

- Absorption of the exudate up to 120 % of its own weight
- Very good compatibility
- Absorption capacity of 3 weeks
- Radiopaque



Hoffmann’s ENDO ABSORB PLUS	
Order No.	Package size
84040	5 g powder
84039	10 ml liquid

COMPOSITION

Powder: calcium compounds, bentonite, radiocontrast agent
Liquid: alcohol

POWDER REF 84026

LIQUID REF 84027

Permanent root canal filling material based on zinc oxide and eugenol. Radiopaque.

HOFFMANN‘S PROXI APEX

AREAS OF APPLICATION

Permanent root canal filling material

- After vital extirpation
- After gangrene treatment
- Before apicoectomy

HOW IT WORKS

Hoffmann‘s PROXIAPEX is a eugenol-containing root filling material for permanent treatments. During the 20 minute setting process the pH value is neutralized. The material is radiopaque.

SETTING TIME: 4:00 - 15:00 minutes

ADVANTAGES

- Very good tolerability
- Alternative to antibiotics and cortisone
- Neutral pH value
- No irritation of the apical soft tissue after setting
- Good canal wall resistance
- Tight sealing of the dentin canals thanks to increased viscosity
- Quick setting
- High radiopacity

CONTRAINDICATION

Do not use if you are allergic to eugenol.

Hoffmann’s PROXI APEX	
Order No.	Package size
84026	10 g powder
84027	10 ml liquid

COMPOSITION

Powder: zinc compounds, calcium compounds, zirconium oxide
Liquid: eugenol

HOFFMANN´S ZINC OXIDE EUGENOL – WITH CLOVE OIL

AREAS OF APPLICATION

- Short-term temporary sealing of cavities with pain-reducing and soothing effect

ADVANTAGES

- Pure natural clove oil
- Intense flavour of cloves

NOTE

A closed dentin layer is a prerequisite for application

Hoffmann's ZINC OXIDE EUGENOL	
Order No.	Package size
8001002	30 g powder 15 ml liquid

COMPOSITION

Powder: zinc oxide
Liquid: eugenol

ORDER HERE

Ready-to-use temporary filling cement

HOFFMANN'S EASY FILL AKUT
HOFFMANN'S EASY FILL CHERRY BLOSSOM

AREAS OF APPLICATION

- Bacteria-proof temporary filling
- In endodontics, secure sealing of solid or liquid inlay medications

COMPOSITION

Zinc oxide, potassium sulfate, zinc sulfate

ADVANTAGES

- Ready-to-use
- Smooth consistency
- Can be easily modelled with customary filling instruments
- Self-curing under moisture access
- Good adaptation to cavity margins
- Easy removal from the cavity with a probe or an excavator
- Eugenol-free

Hoffmann's Easy Fill AKUT		
Order No.	Package size	Colour
8100400	1 x 40 g paste	white

Hoffmann's Easy Fill Cherry Blossom		
Order No.	Package size	Colour
8100500	1 x 40 g paste	pink

ORDER HERE

Temporary sealing material

HOFFMANN'S GUTTAPERCHA

AREAS OF APPLICATION
- Temporary filling of cavities
- Sealing of holes in implant screws during the healing phase

ADVANTAGES
- Genuine raw gutta-percha
- High biocompatibility
- Easy to remove without residues
- Easy removal from the cavity with a probe or an excavator
- Eugenol-free

GUTTAPERCHA		
Order No.	Package size	Colour
82303	Sticks, 110 g	---

COMPOSITION
Zinc oxide, gutta-percha, paraffin, beeswax

POWDER REF 8100203

LIQUID REF 8100300

Temporary filling cement

HOFFMANN'S PROVISIONAL CEMENT

AREAS OF APPLICATION
- Classic short-term temporary closure of cavities

For classic short-term temporary fillings, Hoffmann's Provisional Cement is saliva-proof over a period of one month and can be used for temporary sealing. The durability of the temporary seal strongly depends on the oral flora and oral hygiene, as well as the diet of the individual patient.

TEMPORARY CEMENT		
Order No.	Package size	Colour
8100203	1 x 50 g powder	---
8100300	1 x 40 ml liquid	---

ADVANTAGES
- Easily removable from the cavity
- Saliva-proof over a period of one month
- Biocompatible due to exclusively inorganic ingredients

SETTING TIME: 1:00 - 3:00 minutes

COMPOSITION
Powder: zinc oxide, aluminium hydroxide
Liquid: o-phosphoric acid

ORDER HERE

Thermoplastic impression compound for precise functional impressions

HOFFMANN'S IMPRESSION COMPOUND RED – PLATES

AREAS OF APPLICATION
- Individual impressions
- Bite registration, also of edentulous mandibles before the production of special splints

Also suitable for small and highly sophisticated modelling techniques and modelling techniques used in jewellery workshops.

PROCESSING TEMPERATURE
58 – 62 °C

ADVANTAGES
- Easy to heat
- Easy to knead
- Does not stick to gloves, teeth or stumps
- Bite registration can be easily repositioned, corrected and milled
- Dimension-true reproduction of detail
- Odourless
- Composition of natural raw materials with a high degree of pharmaceutical-grade purity
- Physiologically harmless
- Compostable

IMPRESSION COMPOUND RED		
Order No.	Package size	Colour
82604	6 plates	red
82605	1 plate	red

COMPOSITION
Stearin, copal, talc

ORDER HERE

Thermoplastic impression compound for precise impressions and occlusal bite registration

HOFFMANN'S IMPRESSION COMPOUND GREEN – BARS

AREAS OF APPLICATION
- Correction of impressions
- Enhancing the impression edges
- Occlusal bite registration
- Copper ring impressions

PROCESSING TEMPERATURE
58 – 62 °C

ADVANTAGES
- Easy to heat
- Excellent flowability
- Even deformability
- Bite registration can be easily repositioned, corrected and milled
- Rapidly hardens in cold water
- Composition of natural raw materials with a high degree of pharmaceutical-grade purity
- Physiologically harmless
- Compostable

IMPRESSION COMPOUND GREEN		
Order No.	Package size	Colour
82607	15 sticks	green

COMPOSITION
Stearin, copal, talc, carnauba wax

ORDER HERE

HOFFMANN'S CASTING WAX – INLAY WAX (BLUE OR IVORY)

AREAS OF APPLICATION

- Stick casting wax with excellent natural plasticity, excellently suited for the modelling of inlays, onlays, crowns and bridges
- In many cases also suited for small and complicated modelling techniques used in jewellery workshops

MELTING POINT

ca. 75 °C

BLUE – traditionally for cast gold fillings
IVORY – for ceramic and synthetic restorations

83001	20 sticks, 30 g	blue
83101	20 sticks, 30 g	ivory

ADVANTAGES

- Particularly suitable for the traditional direct wax technique
- Dimensionally stable
- Residue-free combustion
- Composition of natural raw materials with a high degree of pharmaceutical-grade purity
- Physiologically harmless
- Biodegradable

TIP

Processing is carried out by means of a Bunsen burner, open flame and electrical wax knife.

COMPOSITION

Paraffin, carnauba wax, dammar resin, stearin

ORDER HERE

HOFFMANN'S COPAL VARNISH – CAVITY VARNISH

AREAS OF APPLICATION

- Disinfecting cavity protection varnish for the avoidance of post-operative sensitivity
- Cavity protection varnish before cement fillings
- Sealing of dentinal tubules
- Lining of cavities before amalgam fillings and restorations made of gold to protect against corrosion products
- Insulation against thermal irritation
- Protective varnish for the surfaces of cement fillings and plaster models

COPAL VARNISH		
Order No.	Package size	Colour
81901	50 ml, liquid	---

ADVANTAGES

- Made of natural raw materials
- Ready-to-use solution
- Contains no chloroform or ethyl ether
- Fluoride free

COMPOSITION

Copal, ethanol

Adhesive wax speciality – breaks like glass

HOFFMANN'S ADHESIVE WAX (RED OR YELLOW)

AREAS OF APPLICATION

- Blocking out undercuts on the model
- Fixation of parts to be soldered before making the soldering model
- Crown and bridge modellation: Fixation of model to a casting funnel, blocking and securing the cap to a bridge
- Re-fixation of severed bridge modellations in order to prevent tension in the wax
- Fracture repairs of prostheses: Fixation of broken denture bases or chipped teeth for subsequent making of model or matrix
- Fixation of the maxilla and mandible for insertion in an articulator

MELTING POINT

ca. 70 °C

ADHESIVE WAX		
Order No.	Package size	Colour
82914	14 sticks, 70 g	red
82913	14 sticks, 70 g	yellow

ADVANTAGES

- Particularly suitably for the traditional direct wax technique
- Stick shape very easily workable by heating the wax directly over a flame (drips) or controlled melting on a hot instrument
- Excellent adhesive properties; adheres to gypsum or other dental materials
- Made of pure natural raw materials
- 100 % error control, no undetected warping of modellations or fixations: the material is hard and brittle at room temperature; the wax does not bend but breaks under load
- Easy removal using steam
- Residue-free combustion – with the pleasant smell of beeswax

COMPOSITION

Colophony, bees wax, carnauba wax

Allergy-free and sustainable work in a dental laboratory with natural shellac base plates

HOFFMANN'S SHELLAC BASE PLATES – PINK

AREAS OF APPLICATION

- Individual impression trays
- Making dentures: Base material for bite impressions and tooth lineups

FEATURES

- Easily and uniformly processed with heat
- Dimensionally stable (retains shape during try-in in patient mouth)
- Available in two versions for maxilla and mandible
- Material thickness approx. 1.3 mm

Advantages compared to light-curing and autopolymerizing materials

- Corrective measures can be taken without material-loss through re-heating
- Natural raw materials with a high degree of pharmaceutical-grade purity
- Physiologically harmless
- Biodegradable
- Skin-friendly – no known allergies
- Pleasant odour

PROCESSING RECOMMENDATIONS

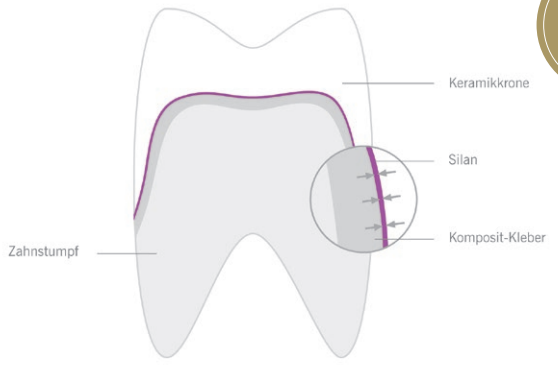
Hoffmann's shellac base plates should be heated very gently with a customary CE-certified hot air blower. Hot air provides a uniform spreading of heat and thus reduces the risk of burning.

COMPOSITION

Shellac, stearin, talc, mica

Video on the subject:
www.hoffmann-dental.com

SHELLAC BASE PLATES	
Order No.	Package size
82824	8 plates maxilla + 4 plates mandible
82825	12 plates maxilla
82826	12 plates mandible
8282104	50 plates maxilla + 50 plates mandible
8282105	100 plates maxilla
8282106	100 plates mandible



ORDER HERE

Recommended by:

agkeramik

In clinical use since 35 years (Roulet 1989 Theiss 2009)

HOFFMANN'S SILANE - COUPLING AGENT

AREAS OF APPLICATION

- To increase the chemical bonding force during adhesive cementation of silicate ceramics, silicated oxide ceramic or metal restorations with meth-acrylate bearing cementation materials (composites, compomers and ormocers)
- As a ceramic-composite bonding agent for ceramic repairs

Benefits of Hoffmann's two-component silane

- Full reaction force as the reagents are mixed freshly before each use
- Longer shelf life after opening the bottle
- Optimal chemical bonding surface with simultaneous good surface wettability
- Prevention of adhesion defects

SILAN		
Order No.	Package size	Colour
82101	Component A, 5 ml Component B, 5 ml	---

COMPOSITION

Acetic acid in ethanol solution, 3-methacryloyloxy-propyltrimethoxysilane in ethanol solution

SPATULA REF 82900

BLOCK REF 82908

On hot summer days
put a cool pack under the glass plate!

TIPP

HOFFMANN'S EXPERT MIXING TOOLS

Glass mixing block – solid crystal block

Shatter-proof, resistant to abrasion even from metal spatulas, and easy to clean. The perfect basics for mix-ing all Hoffmann's cements.

Throughout the entire mixing process the glass main-tains a constant temperature even in the case of heat from reaction. The glass block provides plenty of space for spreading and allows safe and ergonomic handling.

Cement spatula – heavy version

The cement spatula provides high work comfort and facilitates the mixing of cements – even with very solid, packable lining consistencies.

EXPERT MIXING TOOLS		
Order No.	Tool	Dimensions and weight
82900	Mixing block made of crystal glass, solid	150 x 75 x 20 mm, 596 g
82908	Cement spatula, heavy version	approx. 172 mm, approx. 23 g

HOFFMANN´S BACKLIST

Hoffmann's PULPINE NE

10 g Powder
REF 84056

10 ml Liquid
REF 84037

Hoffmann's ENDO ABSORB

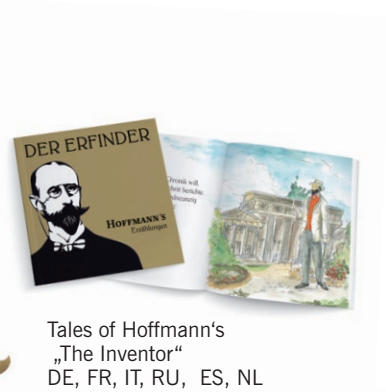
5 g Powder
REF 84035

10 ml Liquid
REF 84057

HOFFMANN´S GADGETS

Hoffmann's
DENTAL MEMO
Memory game

Hoffmann's
CROWN & BEARD



Tales of Hoffmann's
„The Inventor"
DE, FR, IT, RU, ES, NL

Hoffmann's SET
OF POST CARDS
(7 motifs) with display

Tales of Hoffmann's
„In Africa"
DE, FR

HOFFMANN´S INDEX

A
ADHESIVE WAX
Adhesive Wax yellow 66
Adhesive Wax red 66
ALGAE 25
Please refer to Marefix

B
BASE PLATES
Please refer to Shellac Base Plates

C
CARBOXYLATE CEMENT 46, 47
CASTING WAX
Casting Wax blue 64
Casting Wax ivory 64
CASTOR OIL 31
Please refer to PeriO$_3$ Oil, Gingiva Fit
CEMENT4IMPLANT
Please refer to Ready2Protect
CEMENT SPATULA 69
COLOURS 40
Please refer to Harmonic Shades
COPAL 15
COPAL VARNISH 15, 50-51, 65
COPPER 13, 50
COPPER ION CEMENT
Cement4Implant 13, 48
Copper Cement 13, 49
Ready2Protect 13, 42-43, 51

E
EASY FILL
Easy Fill Acute 59
Easy Fill Cherry Blossom 59
ENDO ABSORB 70
ENDO ABSORB PLUS 56
ENDO REPAIR 54
EUGENOL 21
Please refer to Pulpine, Proxi Apex

G
GINGIVA FIT 34-35
GLAS MIXING BLOCK 69
GUTTAPERCHA 23, 60

H
HARMONIC SHADES 40-41

I
IMPRESSION COMPOUND
Impression compound green 15, 63
Impression compound red 15, 62

M
MANUFACTORY 5
MAREFIX 25
Mixing technique 38

O
OLIVE OIL 31
Please refer to PeriO$_3$ Oil, Gingiva Fit
OZONE 28-29

P
PERIO$_3$ OIL 31, 32-33
PHOSPHATE CEMENT
History of Zinc Phosphate Cement 10-11——
Phosphate Cement normal 37, 42-43
Phosphate Cement quick 36, 42-43
PROPOLIS 17, 18-19
Please refer to Pulpine, Pulpine NE, Pulpine Mineral
PROVISONAL CEMENT 61
PROXI APEX 21, 57
PULPINE 21, 52
PULPINE NE 70
PULPINE MINERAL 52
Please refer to Propolis, Pulpine, Pulpine NE

R
READY2MIX 42-43, 44-45
READY2PROTECT
Please refer Copper Cement
READY2PROTECT + COPAL
Please refer Copper Cement, Copal Varnish

S
SHELLAC 27
SHELLAC BASE PLATES 27, 67
SILANE 68

U
UNIVERSAL CEMENT 47

Z
ZINC OXIDE EUGENOL 58
ZINC PHOSPHATE CEMENT
Please refer to Phopshate Cement

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HOFFMANN´S NOMENCLATURE

- Powder stick pack
- Liquid tube
- Powder glass
- Liquid bottle
- Dosing bottle
- Paste-like
- Copper ion
- Radiopaque
- Set
- Luting
- Lining
- Colours of cement
- Eugenol
- Propolis
- Syringe
- Ozone therapy
- Algae
- Sticks
- Round plates
- Lower jaw
- Upper jaw
- Component