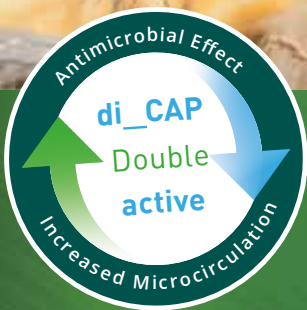




Innovative
Plasma technology
for accelerated
wound healing

Wound treatment with PlasVet® for:

- Veterinary practices
- Animal hospitals
- Horse clinics
- Riding stables
- Horse owners
- Animal physiotherapy practices
- Animal owners



Where PlasVet® can be used



Mud fever

- 67% of all coldblood horses are affected¹



Impact, cut and bite injuries

- Stable owners see it in 25.8% of their animals⁴



Summer eczema

- 71.9% of all exported Icelandic horses are affected³
- 15.6% to 27.3% of all horses of other origins are affected³

**Open wounds
Inflammation
Mites
Fungal infections
Surgery wounds
Swelling
Wound-healing disorders
Hot spots
EOTRH²
and much more.**

PlasVet®: High relevance

to your day-to-day veterinary practice

The innovation

Plasma therapy with PlasVet®

PlasVet® is an innovative therapeutic device for treating wounds with cold plasma. It improves wound healing, even of chronic and poorly healing wounds, thus simplifying wound management. It is also used preventively for all other wounds to avoid wound-healing disorders.

Healing process after a wound-healing disorder following an operation (dog).
The wound will be treated with PlasVet® once daily.



Before
the initial
treatment



After two days

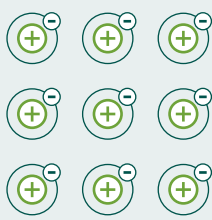


After five days

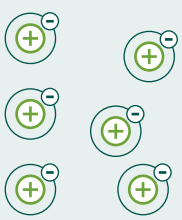


After 10 days

What is plasma?



Solid
(Ice)



Liquid
(Water)



Gaseous
(Steam)



Plasma
(e.g. lightning)

More prevalent than expected

Plasma and its use is omnipresent in our environment:

- In nature – for example, in lightning, the northern lights and the sun
- In technology – for example, in energy-saving lamps, plasma televisions, and in the pre-treatment and refinement of surfaces
- In biomedicine – for example, for optimising biorelevant surfaces, for inactivating microorganisms, or for haemostasis

The fourth state of matter

After solid, liquid and gas, plasma is the fourth state of matter. It is created when more energy is added to a gas, for example in the form of heat. Electrons are liberated from the atoms or molecules, creating free-moving electrons and ions. This ionisation of the gas particles results in increased reactivity of the plasma.

Not every plasma is the same

The nature of the plasma is influenced by the temperature, the electric field, the pressure, etc. In most cases, hot plasma is produced. With PlasVet®, the plasma remains cool and heats up only to body temperature.

The special technology

What is di_CAP®?

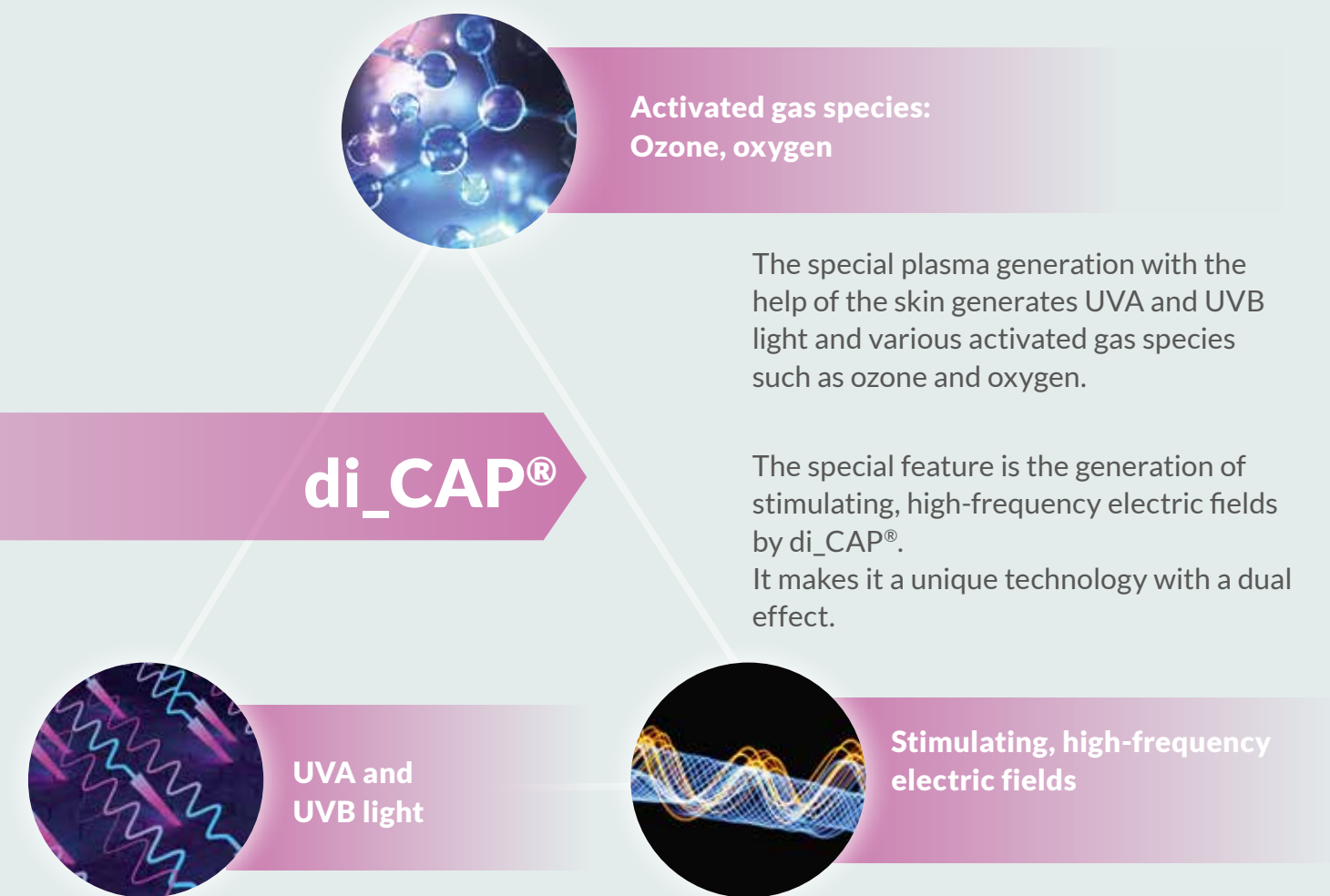
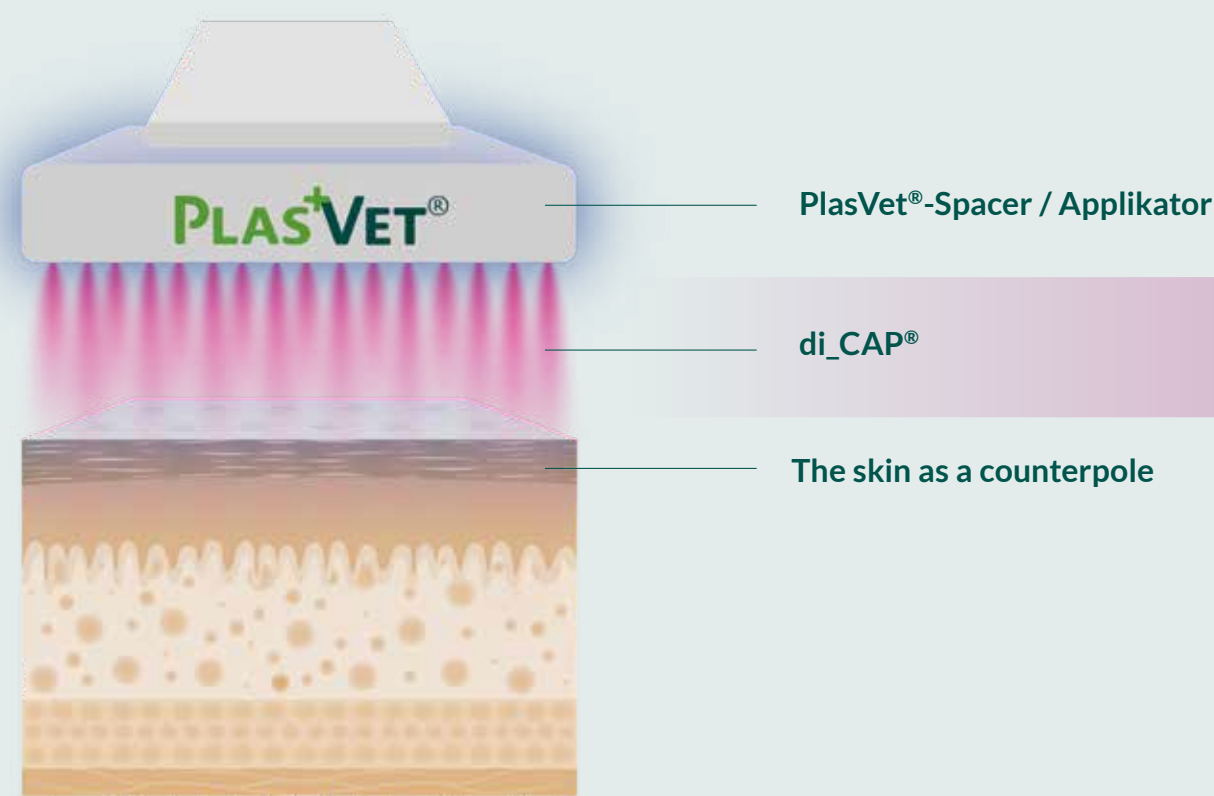
PlasVet® generates cold plasma through dielectric barrier discharge (DBD). In this process, the skin acts as a counterpole. The plasma is generated directly on the skin using ambient air. Cold plasma is produced at atmospheric pressure and low temperatures that do not irritate the skin.

di_CAP®: The skin acts as a counterpole. The cold plasma is created directly on the skin.

With PlasVet®, no additional gas is needed.

The innovation

The innovation in PlasVet® is the unique technology that makes the plasma usable for treatment on the skin: di_CAP®, which makes the skin a part of plasma production.

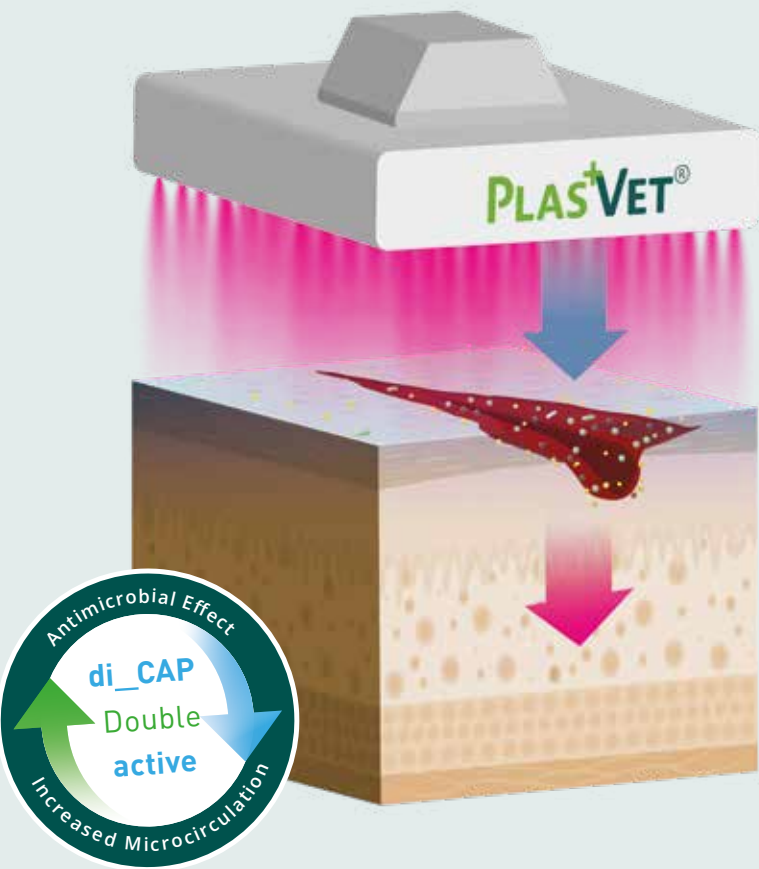


di_CAP®: The skin as a counterpole –

direct attachment, with three physical effects

Mechanism of action

What does di_CAP® do?



1. Mechanism of action: Antimicrobial effect

Kills off microorganisms using, among others, UV light and ozone. Antimicrobial effect against multi-resistant germs, too, without allowing resistance to develop.

2. Mechanism of action: Activates microcirculation

Increases microcirculation through the stimulating, high-frequency electrical fields created by the unique plasma generation with the help of the skin.

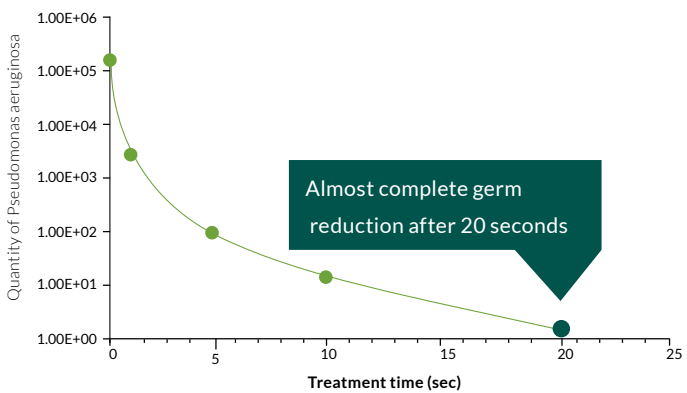
The improved oxygen saturation in the tissue leads to

- Optimised cell migration^{5,7}
- Proliferation of, for example, fibroblasts^{6,7,8}
- Enhanced collagen synthesis^{5,7}
- Accelerated epithelisation^{5,6,9}

Germ load as a measuring parameter for the antimicrobial effect

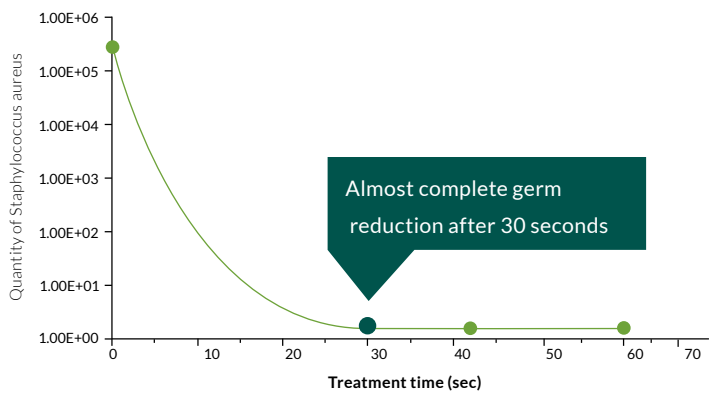
*Pseudomonas aeruginosa*¹⁰

Antimicrobial effect of PlasVet® (in-vitro measurement)



*Staphylococcus aureus*¹⁰

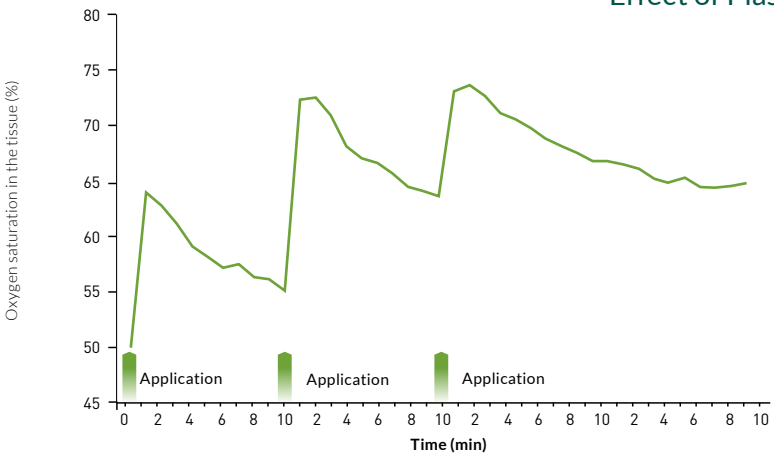
Antimicrobial effect of PlasVet® (in-vitro measurement)



PlasVet® effectively regulates wound hygiene.

Oxygen saturation in tissue as a parameter for the activation of wound healing

Effect of PlasVet® on oxygen formation¹¹



Intensified and sustained increase of oxygen saturation through repeated PlasVet® application

PlasVet® effectively supports the wound-healing process.

Daily application

Effective, simple and safe

Minor wounds can quickly lead to major problems in animals. Mud fever, summer eczema, hot spots or wound-healing disorders are just a few examples.

Your previous treatment routine

- Regular wound dressing
- Ointment treatment
- Antibiotic-embedded dressings



PlasVet® is already used successfully to treat various indications.

PlasVet®

- Simplifies wound treatment
- Is used postoperatively to prevent infections
- Has an antimicrobial effect (also against multi-resistant germs) after just 20 seconds with no development of resistance
- Encourages microcirculation and so accelerates the healing process
- Works without medication
- No anaesthesia required
- Ensures that wounds do not become chronic in the first place
- No side effects yet known
- No doping substances involved (can be applied with no quarantine period)



Handling of PlasVet®



Unpack the applicator aseptically



Place on the hand wand



Lay on the wound



Operating the device with one hand



Apply for 90 seconds per contact surface

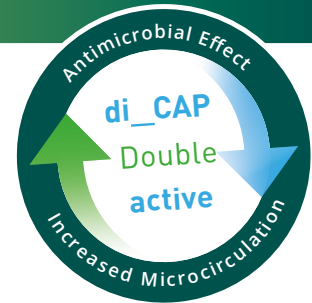


PlasVet®: Easy to use

The innovation for your everyday veterinary medicine



- Antimicrobial effect
- Accelerates wound healing
- Painless in application
- No development of resistance
- No known side effects
- Encourages microcirculation



Sources:

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