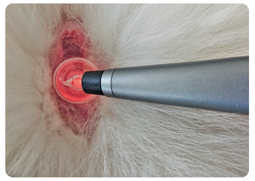
PetCellpen®

THERAPEUTIC INDICATIONS

WOUND MANAGEMENT AND HEALING



– Abrasions
– Bites
– Burns
– Pressure ulcers
– Scars and keloids
– Healing by second intention
– Ulcerated tumors
– Non-healing wounds
–...

DERMATOLOGY AND CUTANEOUS INFECTIONS

– Abscesses
– Hotspots
– Furunculosis and fistulas
– Acne
– Pyodermas
– Trichophytosis
– External otitis
– Vasculopathies
–...

MUSCULOESKELETAL AND NEUROMUSCULAR

– Muscle tension and spasms
– Myofascial pain
– Arthritis, tendinitis
– Spondylosis
– Post-surgical rehabilitation
– Limber tail syndrome
– Myositis
– Neuropathic pain
–...

Benefits for the veterinarian

- CUTTING-EDGE TECHNOLOGY FOR EVERYDAY USE
- NO CONSUMABLES OR DISPOSABLES
- WIRELESS AND LIGHTWEIGHT (250g)
- NO CLIPPING OR POST-CLIPPING CLEANING
- ANY SPECIES, BODY AREA AND SIZE
- RESULTS FROM THE VERY FIRST SESSION
- NO PERSONAL PROTECTIVE EQUIPMENT REQUIRED

Benefits for the patient

- PAINLESS, MINIMAL HANDLING
- NO ADVERSE EFFECTS
- TREATMENT IS WELL TOLERATED
- REDUCES THE CONSUMPTION OF PHARMACEUTICAL PRODUCTS
- FASTER HEALING PROCESS
- EXTENSIVE LIST OF INDICATIONS
- EFFECTIVE IN MULTI-RESISTANT INFECTIONS

PetCellpen® Set

The **PetCellpen® Set** includes (PET-100):

- Transport case
- PetCellpen® device
- Battery charging station with power adapter cable
- 2 rechargeable batteries
- Space for 5 electrodes
- Quick Guide PetCellpen®
- Therapeutic guide

Technical specifications

– Medical plasma source according to DIN SPEC 91315, tested by the INP (Leibniz Institute for Plasma Research and Technology (University of Greifswald).
– High-voltage wireless generator for generating cold atmospheric plasma (CAP)
– The plasma is generated by direct dielectric discharge (dDBD).
– Antibacterial coating of the device.

Dimensions of the device (without electrode)	24.5 cm
Weight (without electrode)	200 g
Frequency range	10 – 100 Hz
Maximum voltage output	25 kVAC
Maximum power output	140 mW/cm²
Battery life	30 – 60 min
Battery charging time	90 min

Available electrodes

STRAIGHT
Art. CP-100.220
Universal use, spot-focused or wide-area (lateral) application, dermatology and wound management.

DISC
Art.CP-100.240
Especially for dermatology, wide-area, gentler effect, for sensitive, painful areas.

CURVED
Art. CP-100.210
For intensive, spot-focused treatment with improved depth of penetration. Ideal for small diameter cavity wounds, orthopaedics and neurodesensitisation.

COMB
Art.CP-100.230
Especially suitable for longer coats and for multipoint use: muscles, back conditions.

Steel core electrode

OTITIS
Art.CP-100.260
Intra-auricular use for the treatment of otitis externa. Can be used with perforated eardrum. Super resistant material with steel core.

For more information scan:

PRODUCT WEB

LIVISTO
Industrial Veterinaria S.A.
a LIVISTO company
Av. Universitat Autònoma, 29
08290 Cerdanyola del Vallès, Barcelona (Spain)

PetCellpen is a Business Unit of: ActivCell Group

2 years warranty

Made in Switzerland

livisto.com

LIVISTO
Animal Health

PetCellpen®

Direct cold atmospheric plasma therapy for small animal medicine

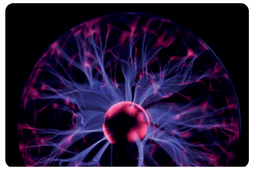
WELCOME TO BOREAL VETERINARY MEDICINE

Along with you

PetCellpen®

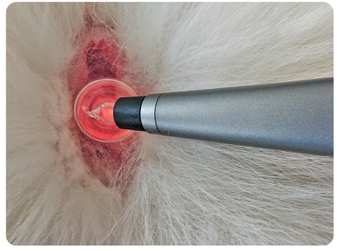
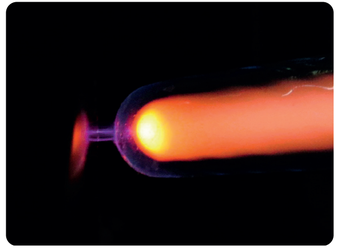
Plasma is the **fourth state of matter** after solid, liquid and gas. Plasma is a gaseous state where ions circulate freely, i.e. **an ionized gas**. This ionization can be caused by an increase in temperature or strong electromagnetic changes. Lightning and the aurora borealis are examples of atmospheric plasma that can be found in nature.





COLD ATMOSPHERIC PLASMA THERAPY (CAP)

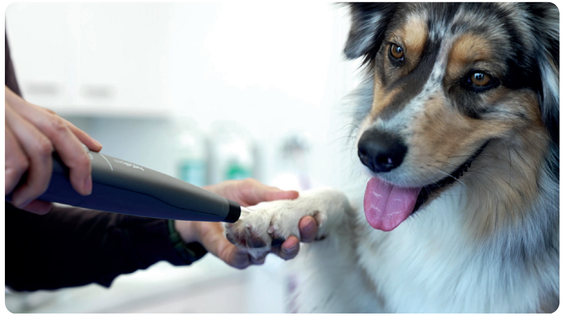
Cold atmospheric plasma is therefore a partially ionized gas, below 40°C, highly electrically conductive. The technology most commonly used in medicine is DBD (Dielectric Barrier Discharge), where the electrode is protected by an insulating layer of glass (dielectric) and **the patient serves as a counter electrode**.

The primary plasma applies voltage to the dielectric and the secondary plasma is generated by discharges between the device and the patient (conducting surface), **which generates the biological and therapeutic action of the cold plasma**. Due to the low electrical currents and its low temperature (<40°C) this technology can be applied on living tissues and is widely accepted by patients.

WELCOME TO BOREAL VETERINARY MEDICINE

The various biological effects of CAP are based on the synergistic effects of **the plasma components**.Therapeutic cold plasma consists of, among other things, ions, electrons, **reactive oxygen and nitrogen species (ROS and RNS)**, UV radiation and **electromagnetic fields**.



THERAPEUTIC EFFECTS OF COLD PLASMA (CAP)

Tissue penetration
PetCellpen® generates a plasma current that is directed on the skin surface with the help of the electrodes, **effective down to the basal layer of the skin and the adjacent tissue**.

Direct cell activation
CAP directly stimulates the body's cells and changes their behaviour.
Healing processes are promoted through increased cell proliferation, inflammation is reduced by influencing the formation of cellular mediators, and the **immune system** is boosted. **Tissue remodelling** is improved.

Debridement effect
Damaged cells are eliminated earlier with the help of macrophages because their DNA is more sensitive to the effects of CAP, thus favouring the **development of granulation tissue** and healing.

Broad antimicrobial spectrum
Reactive species (ROS, RNS) have an antimicrobial, **resistance-free** effect, and is therefore effective against MRSA bacteria and biofilms. It also has a **fungicidal effect, antiviral and parasiticidal effect**.

Promotes angiogenesis
CAP has an immediate and lasting **hyperaemic effect** on the treated tissue. The formation of new blood vessels is also stimulated. This improves the metabolism and **accelerates healing**.

Electrotherapy
The electromagnetic signals release **muscle blocks**, inhibit **pain**, help recovering and stimulating after **nerve damage** and prevent denervation of associated muscles.

ELECTRODE
The electrode is placed lightly in contact with the patient's treatment area. Between them, an audible and visible plasma is generated in the dark. There is no need to shave or use any contact agent.

30-60 min

MARKING LINE
Hold the device behind the line to get optimal voltage output to the electrode.

IMPULSES
The Impulse/s setting determines the pulse frequency from 1 to 100 Hz according to the indication and recommendations in the Therapy Guide.

AMPLITUDE
The rotary "Amplitude" control is used to switch the device on and off. Turning the control determines the device's output power and consequently the intensity of the therapy.