



breakproof

**Powerful, mobile cold plasma
therapy for orthopaedics and
wound healing**



Straight steel core electrode for the EquCellpen®

Benefits for the patient

- Disinfects quickly and efficiently with deep action
- Accelerates healing
- Calms inflammation
- Stimulates even poorly healing tissue such as nerves and tendons
- No side effects
- Painless and therefore well tolerated



2-year
guarantee



Made in
Switzerland

EquCell® is a Business Unit of

ActivCell
Group

ActivCell Group AG
Wolfsackerstrasse 49
5600 Lenzburg, Switzerland

www.activcellgroup.com
www.equcell.ch

Cold plasma therapy: effective for all infected skin diseases and wounds



Antiseptic effect of cold plasma therapy:

- Formation of reactive species in tissue with direct cold plasma source¹
- Effective and fast oxidative disinfection by the reactive species¹
- «Ion etching» with pore formation up to denaturation of the cell membrane²
- Non-specific mechanism of action is unaffected by multidrug resistance³
- Biofilms are degraded⁴
- Deep action at least into hair follicles⁵

The EquCellpen® was tested at the Leibniz-Institut für Plasma Science and Technology e.V. (INP) in Germany according DIN Spec 91315:

- Defines the requirements for medical plasma sources
- Physical performance testing (patient leakage current, temperature, radiation, ozone)
- Testing of chemical specifications (pH value, hydrogen peroxide, nitrates/nitrites)
- Biological effects (antisepsis, cytotoxicity)

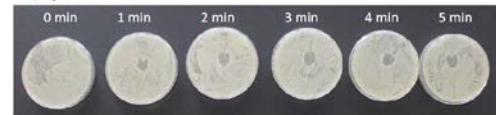
Inoculated untreated (0 min) and plasma-treated agar plates (for one example); from left to right – 0 min (untreated control) to 5 min plasma treatment time with the plasma source EquCellpen for the respective microorganism (Staphylococcus aureus DSM 799/ATCC 6538, Staphylococcus epidermidis DSM 20044/ATCC 14990, Escherichia coli K-12 DSM 11250/NCTC 10538, Pseudomonas aeruginosa DSM 50071/ATCC 10145, Candida albicans DSM 1386/ATCC 10321).

Antiseptic spectrum of cold plasma therapy:

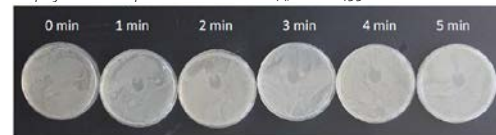
- Bacteria⁶
- Viruses⁷
- Prions⁸
- Parasites⁹
- Fungi¹⁰

In vitro testing of the antiseptic effect of the EquCellpen® (DIN Spec 91315):

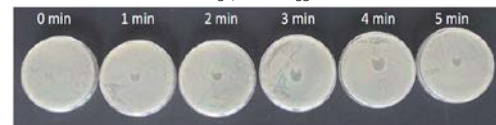
Staphylococcus aureus DSM 799/ATCC 6538



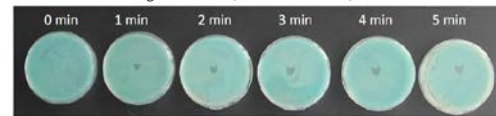
Staphylococcus epidermidis DSM 20044/ATCC 14990



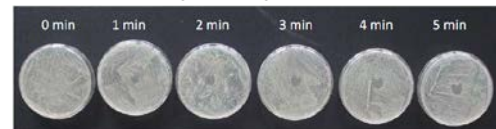
Escherichia coli K-12 DSM 11250/NCTC 10538



Pseudomonas aeruginosa DSM 50071/ATCC 10145



Candida albicans DSM 1386/ATCC 10321



References:

- Meinke MC, Hasse S, Schleusener J, Hahn V, Gerling T, Rasnani KH, Bernhardt T, Ficht P-K, Staffeld A, Bekeschus S, Lademann J, Emmert S, Lohan SB, Boeckmann L. Radical formation in skin and preclinical characterization of a novel medical plasma device for dermatology after single application. Free Radic Biol Med. 2025 Jan;226:199-215. PMID: 39549883. doi: 10.1016/j.freeradbiomed.2024.11.026
- Laroussi M. Cold Plasma in Medicine and Healthcare: The New Frontier in Low Temperature Plasma Applications. Front. Phys. 2020;8:74. doi: 10.3389/fphy.2020.00074
- Hong YF, Kang JG, Lee HY, Uhm HS, Moon E, Park YH. Sterilization effect of atmospheric plasma on Escherichia coli and Bacillus subtilis endospores. Lett Appl Microbiol. 2009 Jan;48(1):33-7. PMID: 19018968. doi: 10.1111/j.1472-765X.2008.02480.x
- Cornell KA, Benfield K, Berntsen T, Clingerman J, Croteau A, Goering S, Moyer D, Provost M, White A, Plumlee D, Oxford JT, Browning J. A Cold Atmospheric Pressure Plasma Discharge Device Exerts Antimicrobial Effects. Int J Latest Trends Eng Technol. 2020 Jan;15(3):036-41. PMID: 32219149
- Lademann O, Kramer A, Richter H, Patzelt A, Meinke MC, Roewert-Huber J, Czaika V, Weltmann K-D, Hartmann B, Koch S. Antisepsis of the follicular reservoir by treatment with tissue-tolerable plasma (TTP). Laser Phys Lett 2011;8:313-17. doi: 10.1002/lapl.201010123
- Brun P, Bernabè G, Marchiori C, Scarpa M, Zuin M, Cavazzana R, Zaniol B. Antibacterial efficacy and mechanisms of action of low power atmospheric pressure cold plasma: membrane permeability, biofilm penetration and antimicrobial sensitization. J Appl Microbiol. 2018 Aug;125(2):398-408. PMID: 29655267. doi: 10.1111/jam.13780
- Aboubakr HA, Mor SK, Higgins LA, Arminen A, Youdeff MM, Bruggeman PJ, Goyal SM. Cold argon-oxygen plasma species oxidize and disintegrate capsid protein of feline calicivirus. PLoS One. 2018 Mar 22;13(3):e0194618. PMID: 29566061. doi: 10.1371/journal.pone.0194618
- Rogez-Kreuz C, Yousfi R, Soufflet C, Quadrio I, Yan Z-X, Huyot V, Aubenque C, Destrez P, Roth K, Roberts C, Favero M, Clayette P. Inactivation of animal and human prions by hydrogen peroxide gas plasma sterilization. Infect Control Hosp Epidemiol. 2009 Aug;30(8):769-77. PMID: 19563265. doi: 10.1086/598342
- Daeschlein G, Scholz S, Arnold A, von Woedtke T, Kindel E, Niggmeier M, Weltmann K-D, Jünger M. In Vitro Activity of Atmospheric Pressure Plasma Jet (APPJ) Plasma Against Clinical Isolates of Demodex Folliculorum. IEEE Transactions on Plasma Science. 2010 Oct;38(10). doi: 10.1109/TPS.2010.2061870
- Heinlin J, Morfill G, Landthaler M, Stolz W, Isbary G, Zimmermann JL, Shimizu T, Karrer S. Plasma medicine: possible applications in dermatology. J Dtsch Dermatol Ges. 2010 Dec;8(12):968-76. PMID: 20718902. doi: 10.1111/j.1610-0387.2010.07495.x