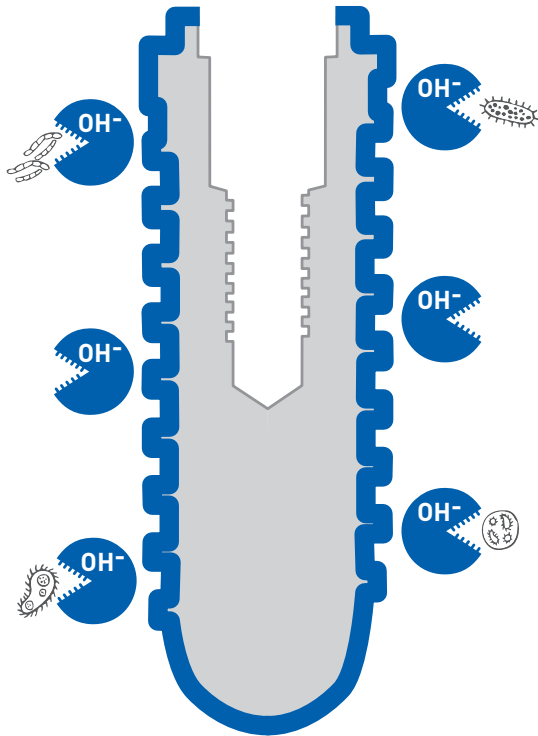


INICELL® – more security right from the start.



Did you know that the high pH value of the INICELL® conditioning solution has an antimicrobial effect?

The highly alkaline INICELL® conditioning solution sodium hydroxide (0.05M NaOH) with a pH value of over 12 has an antimicrobial effect on the implant surface, minimizing the risk of infection and increasing safety in the early healing phase. Only with the APLIQUIQ® conditioning system can you generate the alkaline and superhydrophilic surface INICELL® chairside immediately before implantation.

How does this mechanism work?

The INICELL® conditioning solution (0.05M NaOH) is strongly alkaline, just like calcium hydroxide ($\text{Ca}(\text{OH})_2$), which is used as a medicament in root canal treatments. The antimicrobial effect is produced by the free hydroxyl ions (OH^-) in aqueous solution: These destroy the bacterial membrane through a saponification process and consequently render the microbes innocuous¹.

¹Mohammadi Z, Dummer PM. Int Endod J. 2011;44(8):697-730.

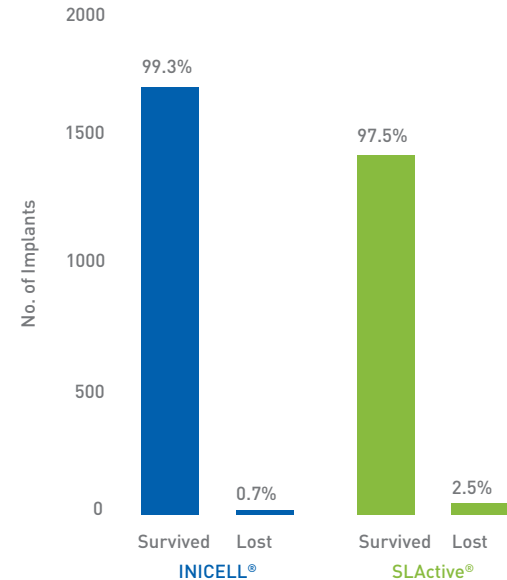
INICELL® – immediately bioavailable

Simultaneously, the superhydrophilic surface enables spontaneous and homogeneous protein adsorption upon blood contact² and creates the basis for a fast and successful osseointegration^{3,4}.

The immediately bioavailable INICELL® surface supports and accelerates the physiological processes during the wound healing and the early osseointegration phase.

The outcome is a faster osseointegration of INICELL® implants: After 14 days, the INICELL® surface shows 40% more bone-to-implant-contact than unconditioned surfaces⁵. Significantly shorter healing times emerge⁶, even with reduced bone quality⁷. Compared to a competing product, lower loss rates result clinically (see graph).

Cumulative Survival Rate⁸
p<0.001 (Pearson's chi square test)



²Tugulu S, Löwe K, Scharnweber, D. et al. J Mater Sci: Mater Med 2010;21, 2751–2763.

³Burkhardt M, Waser J, Milleret V. et al. Sci Rep 2016;6, 21071.

⁴Burkhardt M, Gerber I, Moshfegh C. et al. Biomater. Sci. /2017;5.10.1039C7BM00276A.

⁵Calvo-Guirado JL, Ortiz-Ruiz AJ, Negri B. et al. Clin. Oral Impl. Res. 2010;21, 308–315.

⁶Hicklin SP, Schneebeli E, Chappuis V. et al. Clin. Oral Impl. Res. 2015;00, 1–9.

⁷Held U, Rohner D, Rothamel D. et al. Head & Face Medicine 2013, 9:37.

⁸Makowiecki A, Hadzik J, Blaszczyzyn A. et al. BMC Oral Health 2019;19,79.



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