Lithium disilicate meets zirconium oxide



The IPS e.max CAD-on technique.
Front: IPS e.max CAD superstructure,
IPS e.max ZirCAD framework and the
completed IPS e.max CAD-on bridge
restoration. Centre: IPS e.max
CAD Crystall/Connect fusion glassceramic. Back: Ivomix vibrator unit.

_The IPS e.max CAD-on technique allows dental laboratories to utilise lithium-disilicate glass-ceramics in the fabrication of high-strength, zirconium-based bridges.

What makes the new CAD/CAM-based processing technique IPS e.max CAD-on so special is that it involves a combination of lithium disilicate and zirconium oxide. The lithium-disilicate glass-ceramic IPS e.max CAD offers high strength and aesthetics. It has already been used successfully for the fabrication of single-tooth restorations such as monolithic crowns.

IPS e.max ZirCAD zirconium oxide is used to create high-strength frameworks, primarily for bridge restorations. By means of the IPS e.max CAD-on technique, three- to four-unit posterior bridges that consist of aesthetic, high-strength lithium-disilicate superstructures on a zirconium-oxide framework can be produced.

_The production procedure

The CAD-on technique involves the fabrication of two components: a zirconium-oxide

framework made of IPS e.max ZirCAD and a lithium-disilicate superstructure made of IPS e.max CAD. Both parts are designed using the new and intuitive inLab V3.80 software from Sirona and milled with the Sirona inLab MC-XL unit.

The IPS e.max ZirCAD framework is then subjected to a quick sintering process in the Programat S1. Subsequently, a homogeneous all-ceramic bond between the two individually milled parts is established by means of an innovative fusion glass-ceramic that has been developed especially for the purpose. The fusion process occurs simultaneously with the crystallisation of IPS e.max CAD.

_Treatment goals are reached more quickly and efficiently

IPS e.max CAD-on takes the fabrication of tooth- or implant-borne posterior bridges to the next level with regard to efficiency and productivity. This new technique enables dental laboratories to create zirconium-based IPS e.max CAD restorations within a day and with little manual effort. The results leave nothing to be desired in terms of strength, economy and aesthetics.

The IPS e.max CAD-on technique can be used as an alternative to the layering or press-on technique. From this autumn, IPS e.max CAD blocks and accessories for the IPS e.max CAD-on technique will be available worldwide._

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