Trilux14-20: A Nice Color Change from Cervical to Incisal

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There is no Trilux to mill restorations of crowns longer than 12mm. Almost of all maxillary incisors exceeding that length couldn`t be milled using the Trilux. In this experiment I have changed the position of the Trilux block`s connection key to the milling unit. I could mill the restoration,and get a nice color change from cervical to incisal, too.

Materials and Methods:

VITABLOCS® TriLuxe for CEREC®/inLab® are blocks made of Mark II fine-particle feldspar ceramic, featuring three different color intensity levels (chroma). Owing to this feature, it is possible to reproduce color transitions found in natural teeth with regard to translucency and intensity, and to achieve the target of enhanced integration of the restoration into the residual tooth structure.

Trilux`s individual layers consist of body,enamel,and neck. (1.)The middle layer (body) corresponds to a normal degree of translucency. (2.)The top layer (enamel) is the least intensively shade and at the same time the most translucent. (3.)The bottom layer (neck) is the most highly pigmented and the least translucent.

According to my observation of the Cerec3 milling process, Final Cutting(Removing Restoration from the Vita Mark2 block) is performed by the cylinder bar and always comes from the incisal (occlusal) side of the restoration. (90 degree anti-clockwise position) (Fig1.) Looking at the block enamel-up neck-down, the force exerted by the cylinder bar comes from the right perpendicularly to the connection key. Changing the position of the female part of the connector enable to mill 14mm long restoration.

The ideal position of the block is obtained by a 20 degree counterclockwise rotation from its original position. (Fig2.) The female part of the connector needs to be reshaped using the diamond bar.This block passed the touching process of the Cerec software with Vita Mark14-20 shape. However, after milling such restorations a small part is usually missing on the cervical side. I was able to repair the cervical margin with Vita Ceramic Optimizer®, Vita Akzent glaze®, finishing powder® and Akzent liquid®.(Fig3.4.)

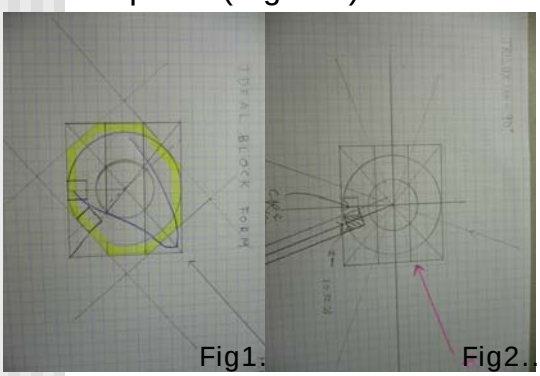

Fig1. Fig2.

Fig3. Fig4.

Result: Changing the position of the block at the milling unit enable to mill the ceramic restoration with an optimal enamel layer and body layer of the Trilux.

Conclusion:If it were possible to change the position of the Trilux block on milling preview of the software with rotation movement, we could make more esthetic restoration on Cerec3D.