Incisal edges are optically complex areas with strategic light dynamics; in this area, prisms converge in a particular way, creating extraordinary optical effects.

Fig 1.- Composite failure of a recently done incisal lengthening, probably due to a poor adhesive technique. As one of the most important color characteristics that we will need to copy from this tooth (1.1) is the incisal halo. (The full color matching procedure will be published on www.lablinemagazine.com)
Fig 2.: One of the most important steps in restorative dentistry is the field isolation, done carefully, invaginating the rubber dam perfectly to avoid filtration and to have full vision of the teeth we will work on.

Fig 3.: The field isolated and invaginated
Fig 4.- With a medium grit abrasive disc, the invisible composite excess is removed completely, and unsupported prisms are flattened with a very delicate touch in order to respect the sound enamel. These kinds of discs consume very efficiently the composite and have very little action on the enamel.

Fig 5.- With an abrasive rubber point, the preparation is polished in order to have an ideal surface to etch,
more efficiently than having irregular prisms in a rough surface.

Fig 6.- Etching is performed with orthophosphoric acid for 15 seconds.

Fig 7.- Rise of the acid gel for 10 seconds and then the cavity is dried with air indirectly (not aiming to the
dentin directly).

Fig 8.- The bonding procedures are performed, bonding agents were applied, thinned with air and polymerized for 20 seconds.
Fig 9.- In the same way, a second layer of adhesive is applied and polymerized for one minute, in order to achieve the best possible degree of conversion of the most important layer, the hybrid layer.

Fig 10.- The palatal wall is built with an enamel mass with the aid of a palatal silicone, previously obtained from a mock-up done directly in the mouth.
Fig 11.- After the palatal wall is finished, a correction can be done with a diamond bur at low speed and without water in order to achieve a very precise shape, is very important not to touch the tooth. One shall not worry about the dust generated, which is very easy to remove in a next step.

Fig 12.- With the brush moistened in a pure photocuring resin, the cavity is fully impregnated and then the
excess of adhesive is blown off with plenty of air directly. The cavity will be decontaminated again.

Fig 13.- With the chosen dentin of the global tooth color, an incisal halo will be modeled with the same dentin, these are proven to be the best masses for this effect, due to their natural opacity and light transmission properties. In other words, an opaque dentin will be used to build up the tooth in an area where the enamel is physically very transparent but optically very opaque.
Fig 14.- The dentinal body is placed, in this case, very small, but of extreme importance. It is mandatory to NOT polymerize in order to be able to carry on the next step.

Fig 15.- With the un-polymerized dentin, the „misura“ instrument is passed along the whole margin in order to detect lack or excess of material, leaving a perfect 0.5 mm room for the final enamel layer. With this
kind of instrument is possible to place the dentin in a bulk way and then remove the excess in a very simple and fast way. (picture edited for didactics reason)

Fig 16.- The final layer of enamel is stratified occupying as well the opalescence area.
Fig 17.- Finishing of the surface with a multiblade bur.

Fig 18.- Polishing is done with fine grit rubber tips and a goat brush (Micerium, Italy) with diamond paste (Diamond twist, Premiere USA), and finally with astrobrush (Ivoclar, Lichtenstein) with plenty of water.
Fig 19.- The restoration finished, and ready to remove the dental dam and occlusion check.

Fig 20.- After rubber dam removal and occlusion check, astrobrush was again used and the patient was asked to come back in one month.
Fig 21.- Control after a month, shows the teeth already rehydrated and the composite perfectly blended. Showing how a simplified two layers technique can achieve polychromatic results and even a complex structure such as an incisal halo with only two colors.

Fig 22.- before
Fig 23.- After

Initial situation.
Initial situation.

Mock-up for production of a silicone index.
Look after preparation. Diamond burs weren’t used the intervention was limited to processing of edges of defect by the disks Soflex of two degrees of abrasivity (dark red and red).
Look right after the finishing.
Look in three days.

Look in three days.
References


Visit: http://proyectoshm.com/style/incisal-halo