Mock-up Technique with Luxatemp Star

Whereas veneer care treatments were influenced in the past mainly by patients' desire for aesthetic improvements, veneers are now being used increasingly often for medical indications. This applies to a similar extent for both conventionally prepared veneers and No Prep veneers. Both types of veneer provide extremely gentle treatment of the tooth material, retaining the healthy dental structure as much as possible.

As extensive veneer treatments that are medically necessary also offer the option of improving the smile and in many cases the facial aesthetics too, the importance of mock-up techniques for veneer care treatments has increased considerably over recent years. Many patients also have very specific ideas about what their smile will look like after the treatment, and it is precisely for these patients that the most accurate predictability of the end result is crucial. The treating dentist needs a temporary synthetic material for this that is not only capable of providing high-quality aesthetic results, but also has high-quality longevity, flexural strength, break resistance and colour stability, should the mock-up be worn over a longer period for medical and/or aesthetic reasons.

Case 1

A 12-year-old female patient suffering from amelogenesis imperfecta. Figure 1 shows the initial situation. Teeth 12 to 22 had already been treated previously with composite fillings.

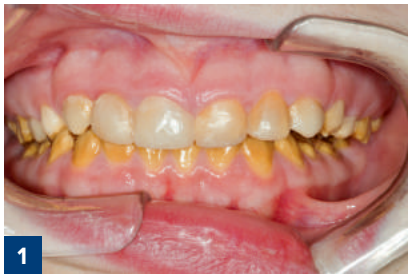
Figure 2 clearly shows the extreme extent to which the condition is expressed.

All the teeth in both the upper and lower jaw are severely affected and have a yellowish-brown discoloration. A conventional crown restoration can be ruled out due to the age of the patient, because a chamfer preparation would mean further loss of tooth substance plus an unacceptable risk of nerve damage. The plan therefore consisted of non-invasive treatment with No Prep veneers and partial crowns preceded by treatment involving long-term provisional prostheses. A study model was initially carried out with Status Blue plus a bite registration with the DIR system. It was followed by an overbite correction with a DIR splint, which the patient wore for 8 weeks. Another DIR measurement was then made to confirm the positioning. As wax-up was created for the patient in this position. A silicone rim was made around this wax-up as an impression for the correction. It is crucially important here that the technician first makes an absolutely precise wax-up, as just models over the gingival area are not acceptable in this case. High demands are also imposed on the silicone rim. It is only possible to ensure that a smooth fit in the patient's mouth will be obtained later when the mock-up is made if the rim gives the exact details of the wax-up.

The creation of the mock-up is very straightforward and can be delegated with no problems (other than the finishing of the edges) to a suitably trained staff member. The silicone rim is filled with Luxatemp Star. It is particularly important here that no bubbles are trapped during filling. For this reason, the mixing tip should always be placed at the bottom of the silicone rim.

The filled silicone rim can then be placed in the patient's mouth and should be left there without any pressure for 3 minutes, i.e. 30 seconds longer than recommended by the manufacturer. This makes sure that the Luxatemp Star has reached its final hardness and that the mock-up will neither be damaged nor partially removed when the silicone rim is taken out. The entire preparation is done intra-orally in this technique.

Figure 3 shows the situation immediately after removal of the silicone rim. There is now only a thin impression layer left, which is removed with a “Moskito” bur (Frank Dental).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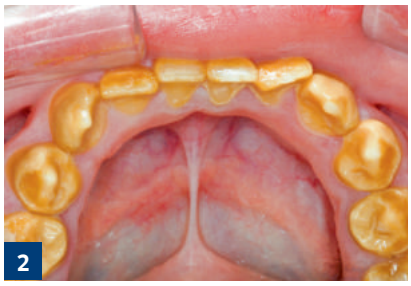
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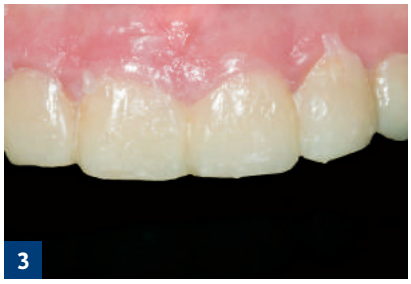
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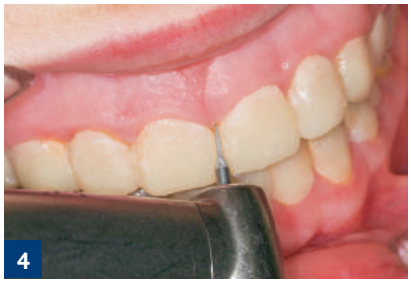
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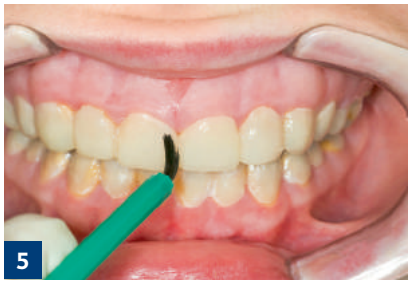
Figure 4 shows the revision work on the edge; special care should be taken here as regards exposure of the papilla.

In the following step, Luxatemp Glaze and Bond (Figure 5) are applied, blown and light-cured. This creates a high-gloss and very aesthetic surface finish that is resistant to staining.

Figure 6 shows the finished mock-up. Remarkably, the production of the mock-up only took 10 minutes. With Luxatemp Star and Luxatemp Glaze and Bond combined with a wax-up plus silicone rim, this offers a simple, fast and efficient method for giving the patient not only an accurate preview (including the possibility of changes in colour of the subsequent treatment outcome), but also because of the optimum material properties (improved flexural and tensile strength and long-term colour stability) the option of wearing it as a trial for a longer period. In the case of our 12-year-old patient, the mother stated that she was called in by the class teacher a few days after the mock-up was fitted; the teacher reported that her daughter was suddenly participating actively in verbal aspects of the lessons. This clearly shows how restrictive these aesthetic problems can be for patients.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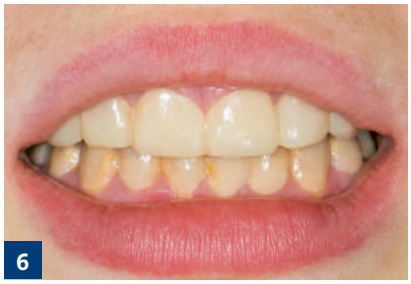
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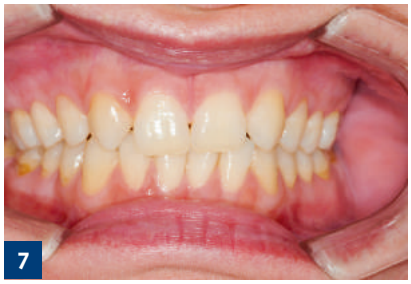
Case 2

A 28-year-old patient presented with functional problems in our practice This involved agenesis of teeth 12 and 22 with a history of orthodontic treatment (Figure 7).

All teeth were mesialized and the gaps were largely closed. The patient complained of frequent headaches. After completion of functional studies (Cadiax Compact and DIR system), a diagnostic wax-up was made and discussed with the patient. To this end, an impression was taken first with Status Blue. Figure 8 shows how precisely Status Blue gives even the finest details.

When filling the impression tray, it is essential to ensure that the mixing tip is kept at the bottom of the tray so that the impression tray can be filled without leaving any bubbles.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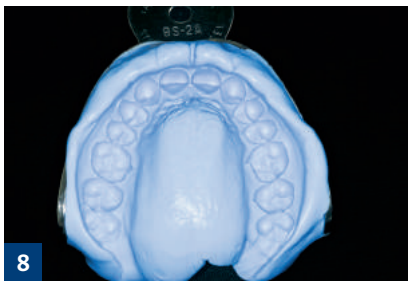
The patient was however worried and uncertain about the resulting aesthetic changes (the canines were to be made into lateral incisors by means of veneers, and the first premolars would become the canines), wanting to know how they would look after the integration of the veneer care treatment. Patients' fears such as these should be taken seriously. Even the most successful dental care treatment, as seen from a medical perspective, is a failure if the resulting aesthetic change is not accepted by the patient. The mock-up technique gives the dentist a method that quickly and easily allows the aesthetics to be demonstrated.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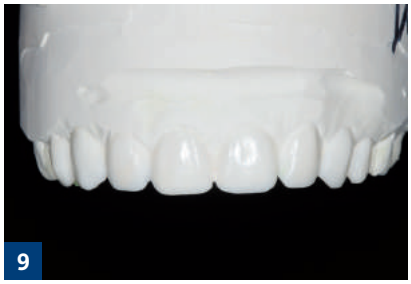
The use of a wax-up as a mock-up is not easily possible in this case. As the patient's decision to carry out the treatment has not been made yet, it is not possible to create a perfect wax-up, because otherwise in order for the wax-up to be created, the model would require areas around the canines and the buccal cavity of the canines to be eliminated. However, this is not acceptable as tooth structure would then also have to be removed for making the mock-up. A wax-up is therefore created first in which no etching is performed on the model. Although not a perfect functional and aesthetic mock-up is not possible this way, the patient is given a good impression of where the treatment is heading. Figure 9 shows the finished wax-up.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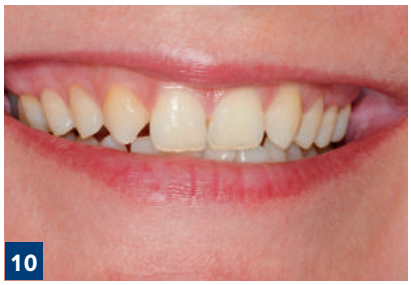
Because no material has been etched away, the lateral incisors are slightly too long and too bulbous. Nevertheless, the aesthetic result of the mock-up is impressive (Figures 10 and 11), although in this case the work was actually done without Luxatemp Glaze and Bond.

For very little effort, it is possible to give the patient an accurate idea of the situation later. Before removal of the mock-up, photos were taken, printed and given to the patient. As is frequently the case, this patient was reluctant to leave the practice without a mock-up.

To sum up: the improved material properties of Luxatemp Star make it the perfect solution, not only for conventional mock-ups but also for functional cases in which the mock-up is worn for a longer period in order e.g. to increase the bite raise gradually and for testing.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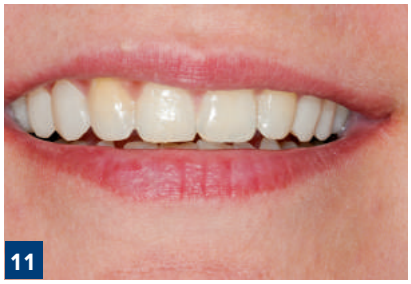
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