The market offers a large selection of elastomer impression materials for fixed prosthodontics. Requirements such as dimensional stability, resilience or biocompatibility are just as important for implant as well as conventional fixed prosthodontics. The only difference for implant prosthetics is that additional emphasis is placed on high end-hardness.

In relation to the end-hardness, polyether materials have become well-established as the classic material used in daily practice. However, independent scientific results reveal another point of view: The table below which compares the Shore A end-hardness between several different elastomeric impression materials after 15 minutes, 1 hour and 24 hours, demonstrates virtually the same values between addition-reaction silicone materials and polyether materials (Fig. 1). On the contrary, after 15 minutes, addition-reaction silicones show even slightly better values. The lower viscosity materials such as Impregum penta soft and addition-reaction light body silicones exhibit lower end-hardness values, which apply to both material groups.

**Impressions with different viscosities**

Depending upon the viscosity, impression materials show different flow properties in the mouth of the patient. If one takes an impression on the same patient using different viscosities, a monophase material will indeed show stability, but will not flow around the structures to be modelled as well as a light or regular body material (Fig. 2,3).

The new surface-activated AFFINIS PRECIOUS delivers excellent flow properties on the tooth surface. Yet, it does not drip or slump, due to the thixotropic properties of the material (Fig. 4).

Cross-sections of the impressions with ITI impression posts demonstrate how well the impression material flows around the posts (Fig. 5-7). Depending upon how necessary or useful it is, the dentist will ultimately decide on which viscosity of tray and syringe material to use for the implant.

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**Abb. 1: Shore A end-hardness.**

**Abb. 2: Monophase material.**

**Abb. 3: Light body material.**

**Abb. 4: AFFINIS PRECIOUS regular body.**
impression. However, a lower viscosity syringe material will ensure that the oral structures are precisely reproduced. On the other hand, a monophase material guarantees higher final strength overall. The importance of using impression materials with different viscosities becomes more essential, not only for implant posts, but also simultaneously for impressions on patients with subgingival marginal preparations. In these types of combined clinical cases, a low viscosity syringe material and a heavy body tray material is recommended. My material of choice is AFFINIS PRECIOUS light or regular body for this type of application because of its excellent legibility when combined with AFFINIS heavy body (Fig. 10).

Generally, I prefer using the open impression technique for implant impressions. On one hand, the large retentive surface guarantees stable seating of the impression post in the impression. In contrast to this, there is a risk that the registration cap can be shifted in the impression. The screw fastening of the laboratory analogue provides the dental technician with more security during model fabrication. When performing the open impression technique, I proceed as follows: The entry point for the screw of the impression post is drawn onto the individual tray and subsequently cut out using a diamond wheel (Fig. 8). The hole created is closed with a plastic wax strip to eliminate escape of the impression material when the impression is taken later. The tray can be easily repositioned onto the corresponding dimensional hole without difficulty during the impression procedure. The screw of the impression post presses through the wax strip cover to ensure that it can be easily located once the impression material has set. The wax and a plug of impression material that may be present is now removed from the screw opening using a hand instrument. The screw is then unscrewed and the entire impression removed (Fig. 9).

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