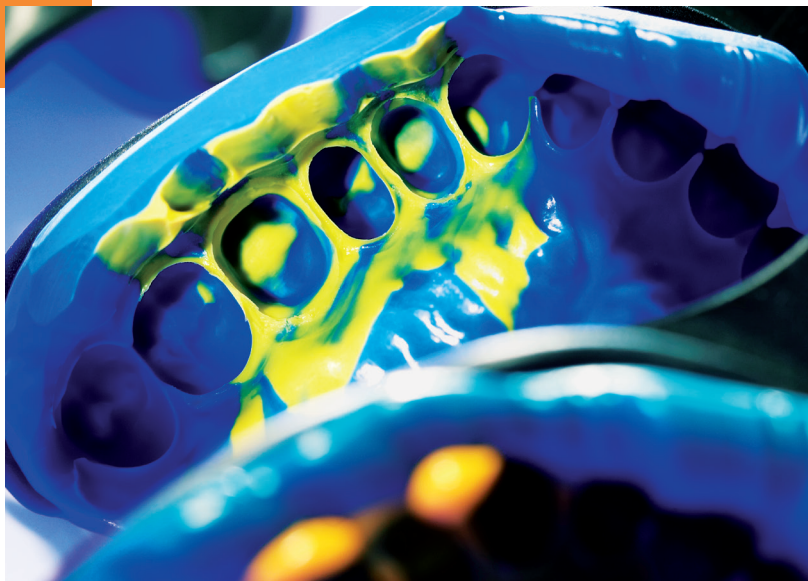


Honigum | Professional Precision



Honigum

Professional Precision

- 1 | **Double-mixing technique**
with Honigum-MixStar Putty and Honigum-Light
Dr. Manuel Kalo

- 2 | **Sandwich impression with Honigum-Heavy**
and Honigum-Light
Dr. DDS Sillas Duarte Jr.

- 3 | **Monophase impression**
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- 4 | **Correction technique with Honigum-MixStar Putty**
and Honigum-Light
Dr. Amin Farah

- 5 | **Implant impressions with Honigum-Heavy**
and Honigum-Light
Dr. Keng Mun Wong

TECHNICAL DATA

Honigum	Light		Mono			Heavy			Putty			MixStar Putty
		 Fast						 Fast	 Soft	 Soft Fast	 Rigid Fast	
Mixing time [min]					0:30				0:30	0:30	0:30	
Working time [min]	2:15	1:30	2:00	2:15	2:30	2:15	2:00	1:15	3:15	1:45	1:45	1:45
Setting time in the mouth [min]	3:30	2:00	3:15	2:30	2:45	3:15	3:15	2:00	3:15	1:45	1:45	3:15
Dimensional change after 24 h [%]	≤ 0.5	≤ 0.5	≤ 0.4	≤ 0.4	≤ 0.4	≤ 0.4	≤ 0.4	≤ 0.4	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Compression set [%]	≤ 0.35	≤ 0.35	≤ 0.7	≤ 0.7	≤ 0.7	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.6
Strain in compression [%]	≈ 4.5	≈ 3.9	3.0 - 5.5	3.0 - 5.5	3.0 - 5.5	≈ 1.4	≈ 1.4	≈ 1.4	≈ 2.2	≈ 2.2	≈ 1.7	≈ 2.0
Color												

1 | Double-mixing technique with Honigum-MixStar Putty and Honigum-Light

Dr. Manuel Kalo

CASE STUDY

In the reported case a 46 year old patient required the replacement of defective composite and amalgam fillings on teeth no. 14 and 15 with existing distal (14) and mesial (15) approximal caries (fig. 1). The teeth were to be restored with ceramic restorations. A special challenge was the patient's gagging reflex. In order to take a precise impression of the cavity prepared according to minimal-invasive aspects the impression material must exhibit specific properties: The correction material should be applicable without bubbles, stable on the preparation, have optimal flow characteristics under pressure, and provide a precise detail reproduction. The tray material should support the properties of the correction material. The preferred material would be one with a true putty consistency and optimal resistance when positioned in order not to trigger the patient's gagging reflex. The products should be suitable for the double-mixing technique with matching setting times.

STEP-BY-STEP

After the removal of the fillings, the excavation of the carious tissue, and the preparation of the cavities (fig. 2), an impression was taken according to the double-mixing technique:

For this purpose, the impression tray is first coated with Tray-Adhesive (fig. 3). While the assistant loads the impression tray with Honigum-MixStar Putty (fig. 4), the dentist syringes the cavities and occlusal surfaces of

the adjacent teeth bubble-free with Honigum-Light (fig. 5). In the course of the 1:45 minute working time the impression tray is inserted in the patient's mouth and under light pressure positioned translative to the occlusal surface where it remains for at least 3:15 minutes. Very helpful for the time management (as well as for the patient) are the acoustic signals of the MixStar-eMotion timers. After the setting time has elapsed, the impression is removed from the patient's mouth, which, particularly in the area of the prepared teeth, must be done parallel to the tooth axis. The material's putty consistency makes this process significantly easier. After cleaning and drying the impression, the result is optically evaluated and the impression is stored at a maximum temperature of 25 °C.

The material properties of Honigum-Mixstar Putty and Honigum-Light provide optimal results (fig. 6). The impression is a bubble-free finely detailed reproduction of the entire preparation (even of the difficult to access areas) and preparation line (fig. 7).

Thanks to the rheologically active matrix (excellent stability yet very good flow characteristics) of Honigum-Light and the putty's characteristics (patient-friendly resistance) no irritation of the sensitive areas in the mouth of the patient due to overflowing or runny impression material occurred.

The precise reproduction of the preparation with the combination of the two impression materials is documented impressively by the perfect fit when seating the final restoration (fig. 8).

DOUBLE-MIXING TECHNIQUE



Initial situation



Preparing the cavities



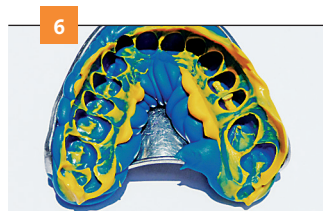
Applying DMG Tray-Adhesive



Hygienic filling of the impression tray with Honigum-MixStar Putty



Homogeneous and bubble-free syringing of the preparation with Honigum-Light



Double-mixing technique with Honigum-MixStar Putty and Honigum-Light



Perfect impression result



Perfectly fitting restoration

2 | Sandwich impression with Honigum-Heavy and Honigum-Light

Dr. DDS Sillas Duarte Jr.

CASE STUDY

A 22 year old patient with good oral health had a discolored grayish central incisor (21) and a discolored composite resin restoration on the other central incisor (11) (fig. 1). The patient was looking to improve anterior esthetics and to close the small diastema between the central incisors.

Bonded porcelain veneers were suggested to correct the tooth shape and to take care of the discoloration as well as to convey a pleasant esthetic appearance. The present clinical report describes an example of esthetic rehabilitation of anterior teeth using porcelain veneers with a special focus on the impression technique.

STEP-BY-STEP

For the minimal invasive preparation the patient was not anesthetized to control the depth of preparation. Two preparation depths (11 = 0.3 mm and 21 = 0.5 mm) were required, to compensate for the gray discoloration. After the preparation, the tooth was acid-etched with 37% phosphoric acid gel for 15 seconds, cleaned and air-dried. The Total-Etch adhesive TECO was applied to tooth 21, and light cured for 20 seconds. Next, an A1 opaque composite was used at the gingival third to mask the gray discoloration. A double cord technique was used to retract the soft tis-

sues. The large retraction cord was left in place for 5 minutes before taking the impression (fig. 2). After the initial preparation, the teeth were cleaned with water spray, and air-dried. An unperforated impression tray was selected according to the patient arch size.

Minimal invasive preparations require a precise impression material and technique; otherwise, fine preparation margins and other detailed areas would not be accurately duplicated. Thus, selection of Honigum-Heavy and Honigum-Light is imperative for detailed reproduction of the preparations.

Automixing of these materials minimizes bubbles and voids in the impression. The MixStar-eMotion was loaded with Honigum-Heavy and afterwards the impression tray was carefully and homogeneously filled. Subsequently, Honigum-Light was applied as a homogeneous string on the Honigum-Heavy (fig. 3). In the meantime, the retraction cord was removed and Honigum-Light was applied simultaneously to the preparation (fig. 4). The loaded tray was positioned into the mouth and removed after the material was completely set, and examined. All details of the minimal preparation were clearly reproduced (fig. 5). The cross-section of the impression (fig. 6) and on the gypsum model (fig. 7) reveals the excellent penetration of Honigum-Light into the sulcus. The follow-up examination showed an impressive esthetic result and healthy gingiva (fig. 8).

SANDWICH IMPRESSION



1 Preoperative view of teeth 11 and 21 showing defective restorations



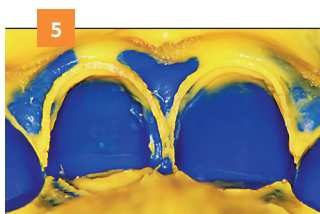
2 Gingiva retraction using the double cord retraction technique



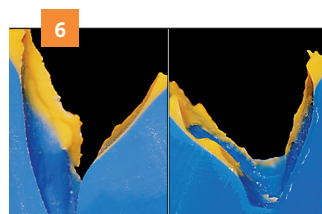
3 Honigum-Light is evenly applied over the Honigum-Heavy



4 Honigum-Light is applied at the same time the retraction cord is removed



5 Close-up view of the impression



6 Cross-section view of the detailed reproduction in the impression material



7 Stone cast of the prepared teeth



8 Treatment result

3 | Monophase impression with Honigum-Mono and Supertec

Dr. Alexa Peiseler

CASE STUDY

A clinical examination of a 43 year old patient revealed insufficient marginal fit of a partial crown which had been placed on tooth no. 16 eight years before. Tooth 16 was vital and did not show any percussion sensitivity, and the radiological exam revealed no pathological conspicuities. A new partial crown restoration of the tooth was indicated.

STEP-BY-STEP

The insufficient partial crown was removed and prepared: Groove preparation on the cervical aspect of the preparation, box shaped MOD preparation to support the occlusal load, angled cusp preparations with slightly rounded tips on the oral and vestibular parts (fig. 1). The customized tray made from Supertec is tried into the mouth prior to taking the impression, then carefully cleaned and coated with the DMG Tray-Adhesive to ensure a reliable bond of the impression material in the tray (fig. 2). With the MixStar-eMotion the tray is evenly filled with Honigum-Mono leaving the typical caterpillar pattern in the impression material (fig. 3). In the meantime, the prepared tooth is thoroughly syringed with Honigum-Mono (fig. 4). Without lifting the tip, all occlusal areas in the prepared jaw

are now loaded with impression material. The customized tray filled with Honigum-Mono is inserted into the patient's mouth starting at the distal end. With moderate pressure the tray is pressed over the dental arch from distal to mesial. Due to the slight pressure and movement applied during this procedure the impression material flows around the dental arch. As soon as pressure and movement stop the material becomes stable thus ensuring a reliable fixation in the mouth of the patient. There is no afterflow of the material. Once the material has set, the impression can be removed from the mouth of the patient by applying slight pressure on the vestibular edge of the impression material.

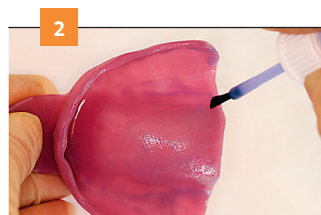
The close up shows the material's impressive surface details (fig. 5). Only a precise impression allows for the fabrication of a dimensionally true gypsum model, the indispensable basis for a perfectly fitting restoration.

The partial crown fabricated in the laboratory shows a perfect marginal fit on the saw and control model (fig. 6). The partial crown was tried in and placed definitively without requiring corrections (fig. 7). This method and material ensure reliably predictable, reproducible prosthetic restorations (fig. 8) with minimal effort yet with the highest level of perfection and the least amount of material and time needed – easy and stress-free.

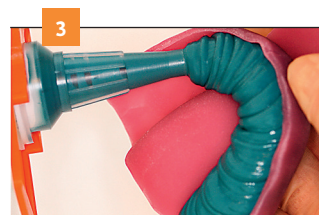
MONOPHASE IMPRESSION



Prepared tooth no. 16 for partial crown



Coating customized tray (Supertec, DMG) with Tray-Adhesive



Filling customized tray with Honigum-Mono



Syringing prepared tooth with Honigum-Mono 50 ml



Perfect, complete and bubble-free detail reproduction



Perfectly fitting partial crown on the saw and control model



Try-in of the partial crown



Perfect rehabilitation

4 | Correction technique with Honigum-MixStar Putty and Honigum-Light

Dr. Amin Farah

CASE STUDY

Due to secondary decay the filling on tooth 46 of a 24 year old patient was removed. For the resulting cavity a crown is indicated. The following treatment plan includes a vestibular porcelain-fused-to-metal crown with a ceramic shoulder.

STEP-BY-STEP

Tooth 46 was prepared with a resin core build-up. The loss of the cusps requires an overlay. Since the projected porcelain-fused-to-metal crown is to be fabricated vestibularly with a ceramic shoulder the groove preparation in that area is rounded (fig. 1). A slightly subgingival preparation line in the visible margin area provides optimal esthetics. First, before taking the impression, the impression tray is tried in. A tray adhesive provides secure retention of the impression material in the tray. It is applied evenly shortly before the tray is loaded. The impression tray is then filled using the MixStar-eMotion, inserted into the mouth by applying constant pressure and, once completely set, removed again (fig. 2). The mandibular arch is perfectly reproduced. As shown in fig. 3 even the finest details of

the preparation are visible. The impression is now trimmed, i. e. undercuts, interdental areas and protrusions are removed. Pressure relief channels prevent build-ups of the light-bodied material during correction. Around the preparation pressure relief channels are applied as well, however, without directly touching the prepared tooth (fig. 4). After trimming, the impression should be thoroughly rinsed and dried. For corrections with Honigum-Light the material is directly applied into the exposed sulcus after the retraction cord has been removed (fig. 5). Afterwards the impression tray is filled with the light-bodied material. Despite the presence of sulcus fluids, Honigum-Light's excellent hydrophilicity ensures deep penetration into the sulcus. The result is an even thinly corrected impression (fig. 6). We would like to particularly emphasize the secure bond between Honigum-Light and Honigum-MixStar Putty.

The enlarged view shows the fine detail reproduction and the clean preparation margin. This is also confirmed on the saw cut/control model which shows a circular, perfectly formed preparation margin (fig. 7). The entire mandibular arch is precisely reproduced – a prerequisite for an exact reproduction of the restoration's occlusion. Fig. 8 shows the seated crown, i. e. the result of a successful treatment concept with processes and materials in perfect harmony with each other.

CORRECTION TECHNIQUE



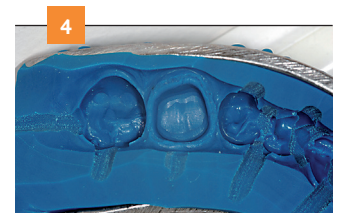
Modified groove preparation on tooth 46



Removal of the set pre-impression (Honigum-MixStar Putty) from the mouth



Reproduction of the finest preparation details in the pre-impression



Trimmed pre-impression with pressure relief channels



Syringing the preparation with Honigum-Light



Fine detail reproduction and cleanly formed preparation margin



Complete reproduction of the preparation line on the control model



Perfectly fitting prosthetic restoration

5 | Implant impressions with Honigum-Heavy and Honigum-Light

Dr. Keng Mun Wong

CASE STUDY

This patient had a missing right first molar. An implant restoration was indicated to replace the missing tooth. Therefore, an implant with regular platform was inserted. The implant was left undisturbed for transmucosal healing for 2 months.

STEP-BY-STEP

Making final impressions for dental implants can be one of the most challenging procedures in restorative dentistry. Traditionally, impression materials with a high final hardness are used for implant impression to capture the accurate position of the implant fixtures as well as details of the surrounding gingiva and the adjacent teeth.

The implant had successfully osseointegrated and was ready for final impression with Honigum-Heavy and Honigum-Light. The healing abutment was removed (fig. 1). A regular size impression coping was connected and

hand-tightened to the implant fixture. The labial view of the impression coping shows three concave areas on the surface of the impression coping. This is a common feature of any impression coping for any implant system. They need to be reproduced during the final impression. In order to capture these fine details the Honigum-Light was used (fig. 2). The impression material was syringed around the implant/soft tissue interface as well as the gingival margins of the neighboring teeth (fig. 3). The second component of the impression material was the heavy-body impression material Honigum-Heavy. This material achieves a very high end hardness and thus a high fixation capability. It was loaded properly into a rigid impression tray to avoid air bubbles (fig. 4). The tray was carefully removed after the impression material had set. The fine details were all recorded and implant fixture position was also captured (fig. 5). With an accurate impression, the dental technician was able to fabricate the abutment and the implant crown precisely. This way expensive and gratuitous remakes can be avoided. For insertion, the customized zirconia abutment was torqued to 35 Ncm (fig. 6). This zirconia implant crown was cemented and occlusion was verified and checked. The one week review showed stable and an excellent result (fig. 7 and 8).

IMPLANT IMPRESSION



1 Healed implant after removal of the healing abutment



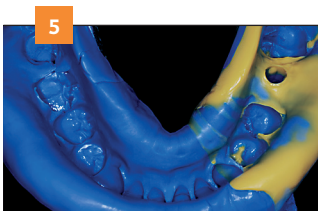
2 Direct and bubble-free syringing of the impression post with Honigum-Light



3 Syringing the entire 3rd quadrant with Honigum-Light



4 Bubble-free, homogeneous application of Honigum-Heavy into the impression tray



5 Detailed impression of the entire lower jaw with Honigum-Heavy and Honigum-Light



6 Seated zirconia abutment



7 Treatment result after one week



8 Smooth integration of the implant in the lower jaw arch

PACKAGING

Honigum-Light

Package

4 Cartridges @ 25 ml	
16 Automix-Tips	
16 Intraoral-Tips	
Honigum-Light	REF 909539
Honigum-Light Fast	REF 909639
2 Cartridges @ 50 ml	
12 Automix-Tips	
12 Intraoral-Tips	
Honigum-Light	REF 909831
Honigum-Light Fast	REF 909832

Economy Pack

16 Cartridges @ 25 ml	
50 Automix-Tips, 50 Intraoral-Tips	
Honigum-Light	REF 909690
Honigum-Light Fast	REF 909691

8 Cartridges @ 50 ml	
50 Automix-Tips, 50 Intraoral-Tips	
Honigum-Light	REF 909835
Honigum-Light Fast	REF 909836

Honigum-Heavy

Package

2 Cartridges @ 50 ml, 4 Automix-Tips	
Honigum-Heavy	REF 909766
Honigum-Heavy Fast	REF 909838
1 Cartridge @ 380 ml, 10 MixStar-Tips	
Honigum-Heavy	REF 909537
Honigum-Heavy Fast	REF 909638

Economy Pack

8 Cartridges @ 50 ml	
16 Automix-Tips	
Honigum-Heavy	REF 909837
Honigum-Heavy Fast	REF 909839
5 Cartridges @ 380 ml	
50 MixStar-Tips	
Honigum-Heavy	REF 909538
Honigum-Heavy Fast	REF 909637

Honigum-Mono

Package

1 Cartridge @ 380 ml	
10 MixStar-Tips	REF 909568
2 Cartridges @ 50 ml	
4 Automix-Tips	
4 Intraoral-Tips	REF 909830
2 Tubes @ 135 ml	
1 Non-slip mixing pad	
2 Tube keys	REF 909551

Economy Pack

5 Cartridges @ 380 ml	
50 MixStar-Tips	REF 909569
8 Cartridges @ 50 ml	
20 Automix-Tips	
20 Intraoral-Tips	REF 909834

Honigum-MixStar Putty

Package

1 Cartridge @ 380 ml	
10 MixStar-Tips	REF 919374

Economy Pack

5 Cartridges @ 380 ml	
50 MixStar-Tips	REF 919375

Honigum-Putty

Package

2 Jars @ 450 ml	
Honigum-Putty Soft	REF 919364
Honigum-Putty Soft Fast	REF 919365
Honigum-Putty Rigid Fast	REF 919366

Economy Pack

8 Jars @ 450 ml	
Honigum-Putty Soft	REF 919369
Honigum-Putty Soft Fast	REF 919370
Honigum-Putty Rigid Fast	REF 919371



DMG

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