Flowable Injection Technique

By

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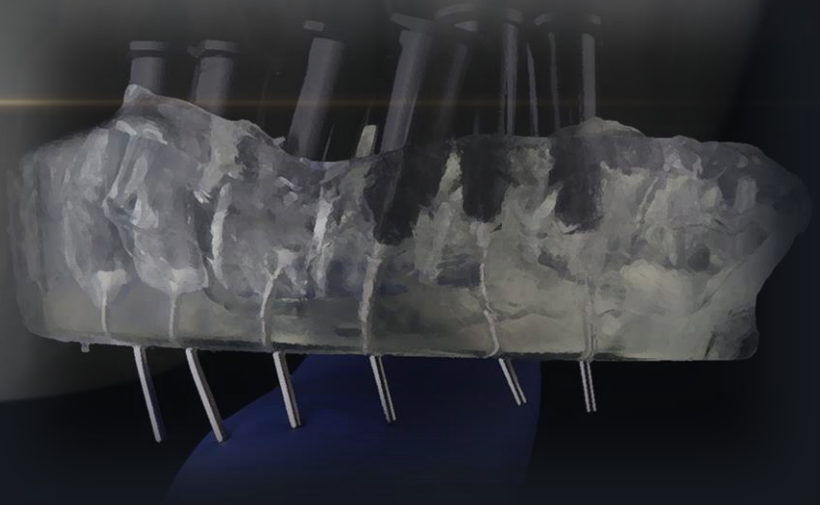


BAIRD

Tokuyama Dental

NOOH

SPECIALIZED DENTAL CLINICS

INTRODUCTION

Resin Composite

Injectable Technique

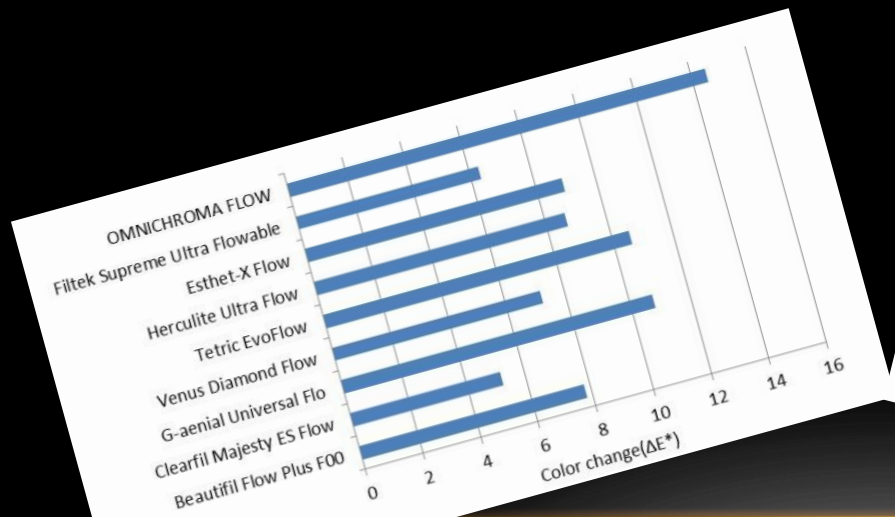
EQUIPMENTS

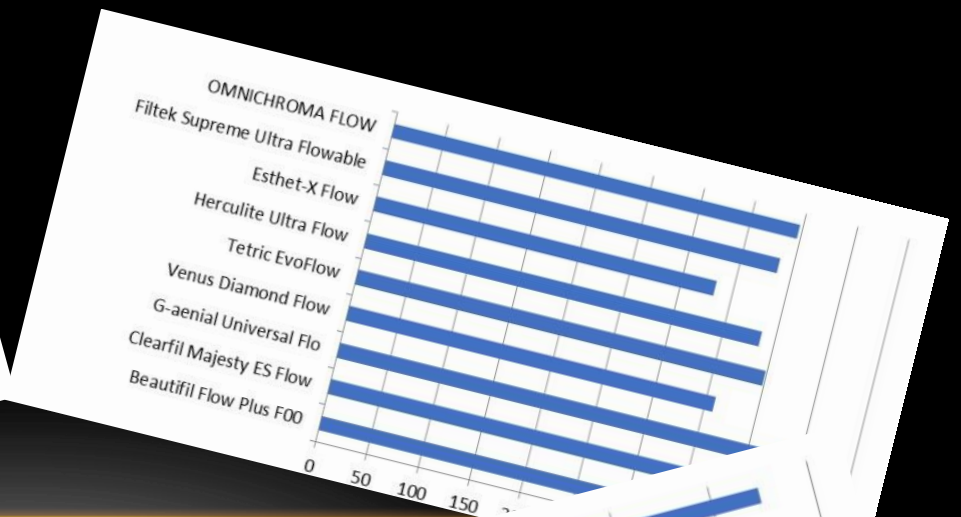

EXACLEAR
CARTRIDGE 51g (48mL)
GC
L
PALFIQUE
OMNICHROMA Flow
PALFIQUE
UNIVERSAL FLOW Medium
1.0mL (1.7g) (Store at 0-25°C)
Medium

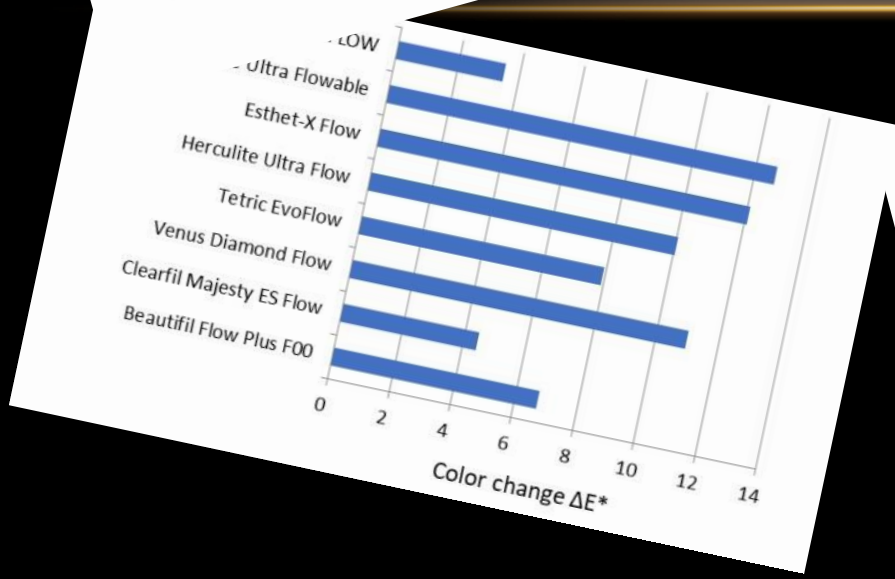
WHY PALIFIQUE OMNICHROMA FLOW?

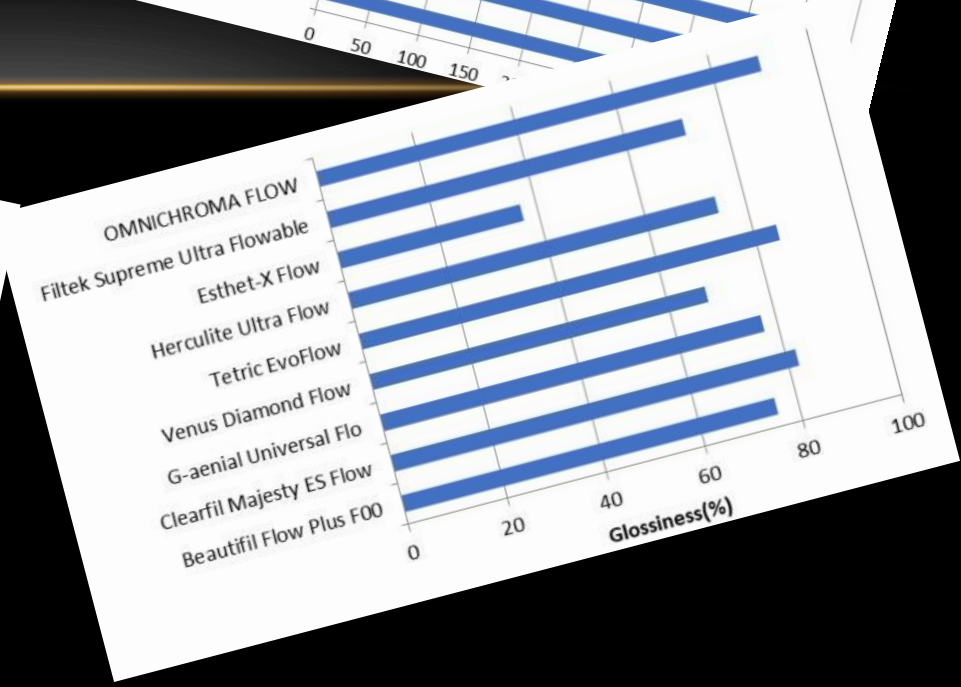
- Excellent esthetic properties •
- Unprecedented color matching •
- High ability to polish •
- High stain resistance Excellent physical-mechanical properties •
- High wear resistance •
- Low polymerization shrinkage (compared with other flowable resin composite

WHY PALIFIQUE OMNICHROMA FLOW?









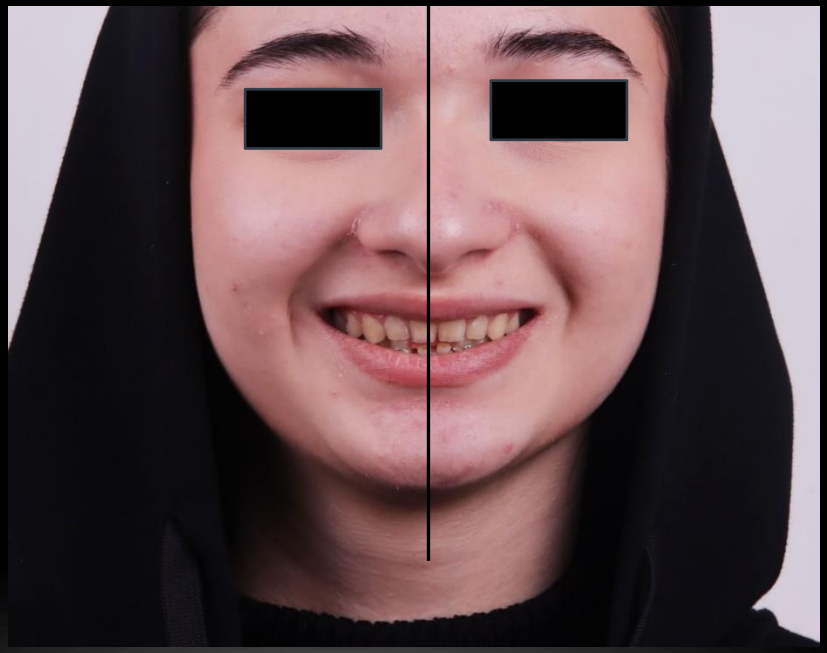
Flowable Injection Technique

CLINICAL CASE STEP BY STEP

PALIFIQUE OMNICHROMA

Flowable Injection Technique

Back to nature by flowable injection technique with smart chromatic material and Digital work flow



ABSTRACT:

The process of acid etching, forcing out brackets, using rotary instruments to mechanically remove composite residues, and cleaning with abrasives before to etching can all cause enamel loss. Cracks, scars, and scratches caused by topographic alterations or enamel loss are possible outcomes. After orthodontic treatment, restorative care for enamel loss, cracks, or scratches is frequently seen as the last phase. This clinical report, which is based on digital workflow, describes post orthodontic treatment, contouring of anterior teeth in a young female patient's smiling disharmony using composite injection technique with new smart chromatic material. Three-dimensional printed models of the digital wax-up were used to produce transparent silicone indexes for enamel fills. While waiting for adulthood and a final prosthodontic solution, this noninvasive, easy-to-understand injectable procedure was able to deliver semipermanent, changeable aesthetic restorations.

1.INTRODUCTION

Resins are thought to be a minimally invasive dental treatment that allows for reversible procedures with acceptable clinical longevity, excellent aesthetic results, and low expenses. An innovative and distinct indirect/direct method for consistently converting a diagnostic wax-up into composite restorations is the injectable resin composite technique. With the improvement of flowable composites highly filled, the composite injection technique has emerged to facilitate the application of resin material and to avoid a practitioner-dependent outcome . Its protocol has been described recently in several articles. Clinical applications involve making temporary restorations, transitional composite restorations (Class III, IV, veneers), pediatric composite crowns, incisal edge length determination before aesthetic crown lengthening, and composite prototype creation for copy milling. Emergency repair of fractured teeth and restorations is also included in this list. The parameters for occlusal function , tooth position and alignment , restoration shape and physiologic contour , restorative material color and texture, lip profile, phonetics, incisal edge position, and gingival orientation can all be established by the patient and the restorative team using the composite injection technique. The diagnostic wax-up is replicated using a clear matrix. It can be inserted intraorally over the teeth that haven't been prepped, serving as a transfer medium for the injection and curing of flowable composite resin. When selecting this procedure, several factors should be considered, including: (Caries risk assessment, Age, Behavior, Periodontal health, Adequate remaining tooth structure, Moisture-controlled field, The longevity of the tooth).

2.clinical report

A 25-year-old female patient presented with a chief complaint of enamel defect in the upper maxillary front teeth (figure 1). History revealed presence of enamel loss after removal of orthodontic appliance. On clinical examination, multiple defect and enamel loss in upper maxillary teeth (Figures 1a to 1c) with healthy periodontal support. Patient insisted for a much less invasive treatment with minimal appointments and without change in shade of upper maxillary teeth. Radiographic examination showed normal structures.

Fig.1 Intra-oral view. (a) right lateral view (b) intra-oral frontal lateral view (c)Intra-oral Left lateral view

DENTAL PHOTGRAPH

EXTRA-ORAL

Pictures that are taken both intra-oral and extra-oral are a crucial component of preventive dentistry because they give your dentist the information they need to make the best decisions final result.
These pictures can demonstrate how oral operations alter a person's facial appearance from the outside.

Communicate with patients
Moreover, taking pictures of your teeth might help you and your dentist communicate more effectively so that you are fully aware of the type of treatment they are recommending.
Sometimes, your dentist can use a camera to project images from within your mouth onto a screen so you can see what the problem is and how it might be fixed. Getting everyone in agreement up front has many advantages and helps prevent misunderstandings later on.

extra-oral view. (a) at rest position

(b) Extra-oral view at smile

(c) Extra-oral view at big smile

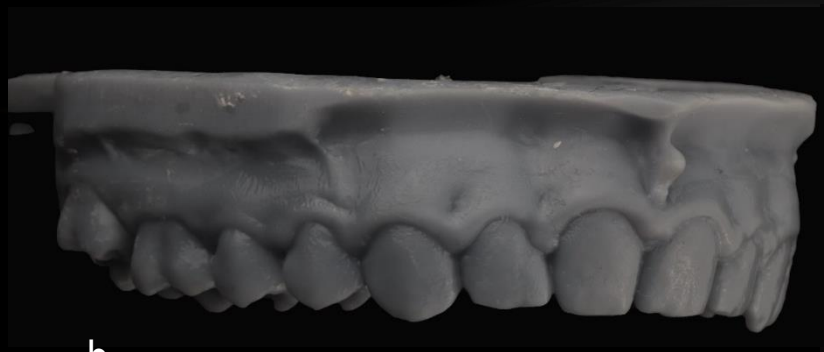
DENTAL PHOTGRAPH

INTRA-ORAL

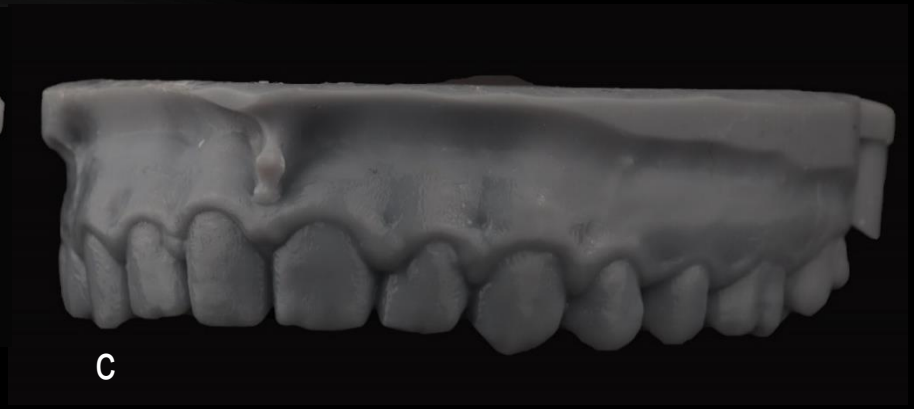
Before the treatment plan, multiple views intra-orally should be taken for many purposes (fig.2a to 2c). It is very useful for the assessment periodontal health and very useful for dental parameters and gingival parameters when make ideal smiling a digital smile design program. After the intra-oral view take impression digitally by (3SHAPE introral scanner) and print study model for provisional design (Fig 3a to 3c).

Fig.2 Intra-oral view. (a) right lateral view (b) intra-oral frontal lateral view (c)Intra-oral Left lateral view

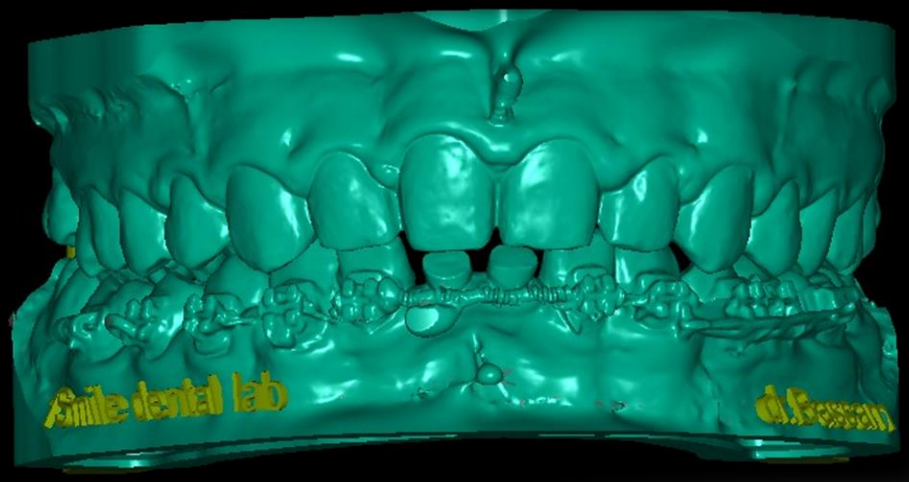
Fig. 3 study model intra-oral view. (a) frontal view

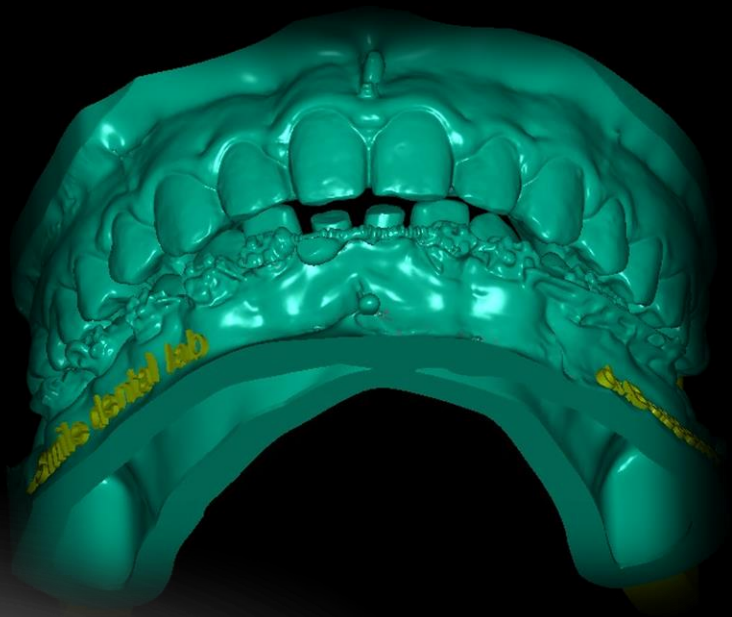


(b) Intra-oral view lateral right



(c) Intra-oral view left right


1Smile dental lab
dr.Bassam


1Smile dental lab


1Smile dental lab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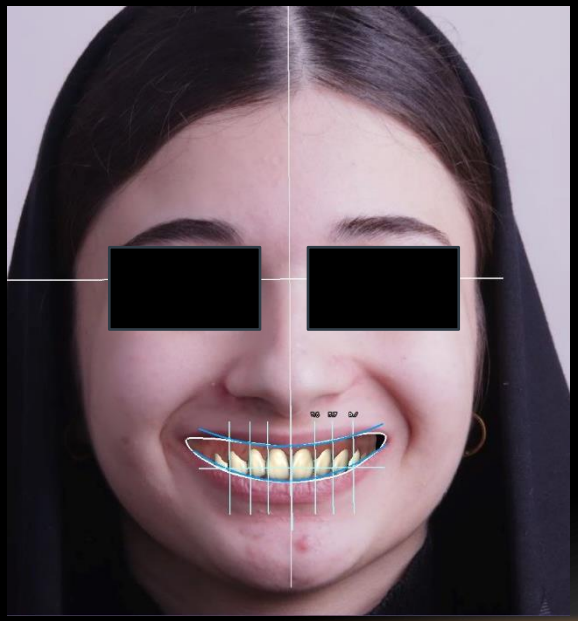
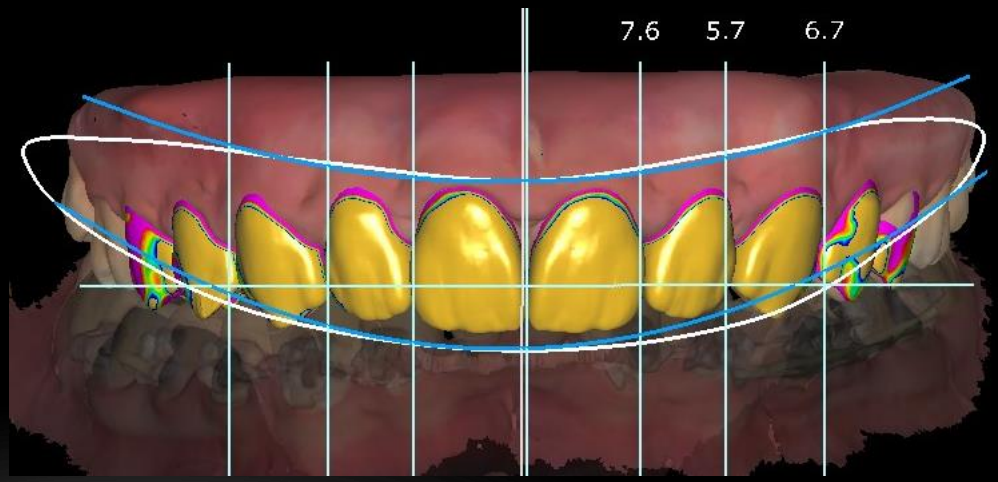
PLANNING





Digital 3D wax-up design on the digital model and overlapped in the portrait picture of the patient

Traditional additive mock-up on the patient based on a 3D printed model of the digital wax-up.

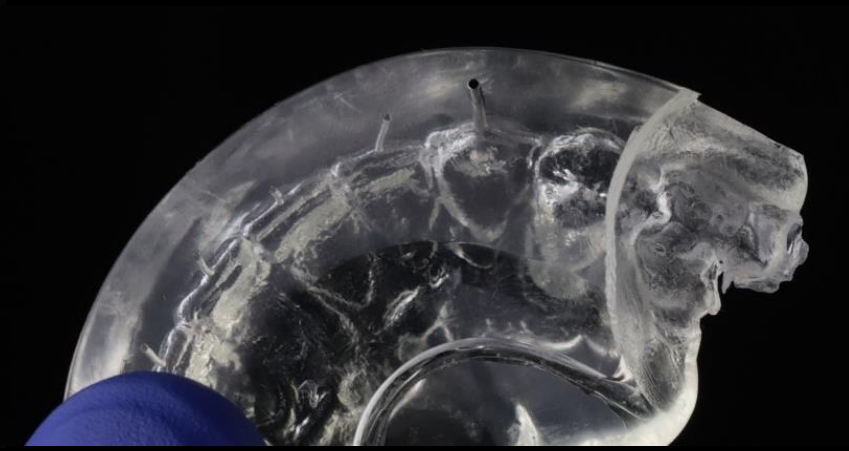
✓WAX-UP/MOCK-UP

✓ Silicone for provisional

Fabrication process of the first transparent silicone key. Figure 12. Detail of the partial digital wax-up, 3D printed model and first silicone key fabricated. Figure 13. Detail of the complete digital wax-up, 3D printed model and second silicone key fabricated.

✓ Silicone for provisional

TRANSPARENT SILICONE INDEX with tips



Make puncture with the tip of the omnichrom flow composite

INDEX COMPLETE

Frontal view of transparent index with incisor holes and ready for flowable injection

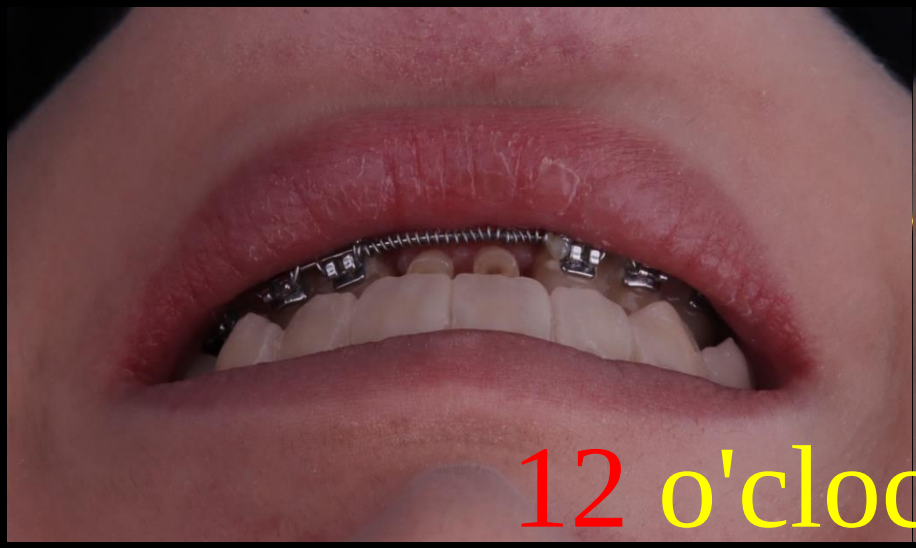





PROVISIONAL MOCK-UP

OCCLUSAL VIEW

PROVISIONAL MOCK-UP



12 o'clock view

PRINTED MODEL FOR FINAL INJECTION

3D printed resin model, from a digital wax-up on 3Shape Dental System*, based on her intraoral scan.

READY FOR INJECTION

✓ INTRA-ORAL PROTOCOL

After Polishing and removing all stains and scratch the labial surface

INTRA-ORAL PROTOCOL

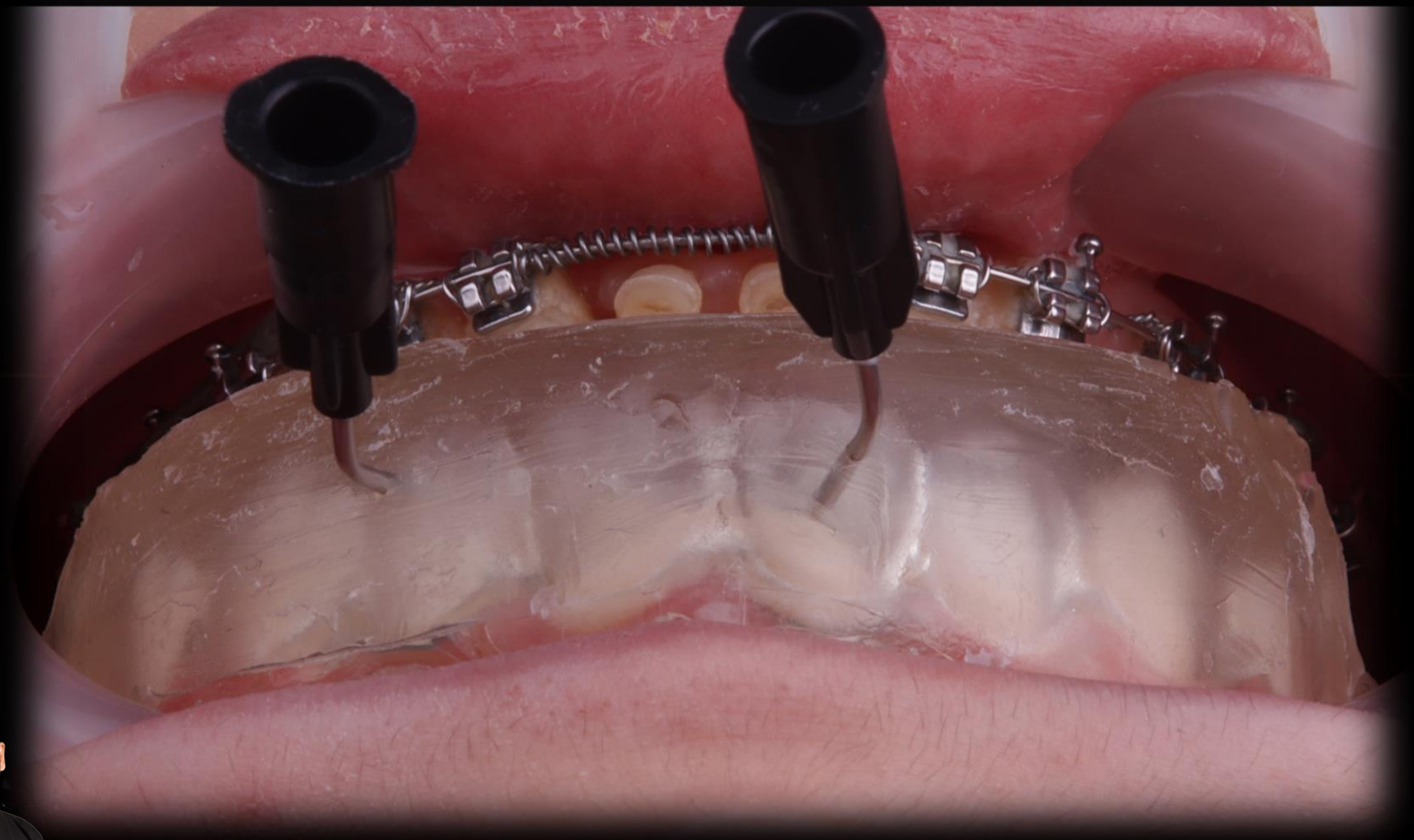
After place retraction cord (000) of upper right central and left lateral incisors

✓ INTRA-ORAL PROTOCOL

Prepare the silicone for final injection

✓ INTRA-ORAL PROTOCOL

checking silicone index befor starting to inject



✓ INTRA-ORAL PROTOCOL

✓ INTRA-ORAL PROTOCOL

Isolation of ajacent two teeth incisors by Teflon

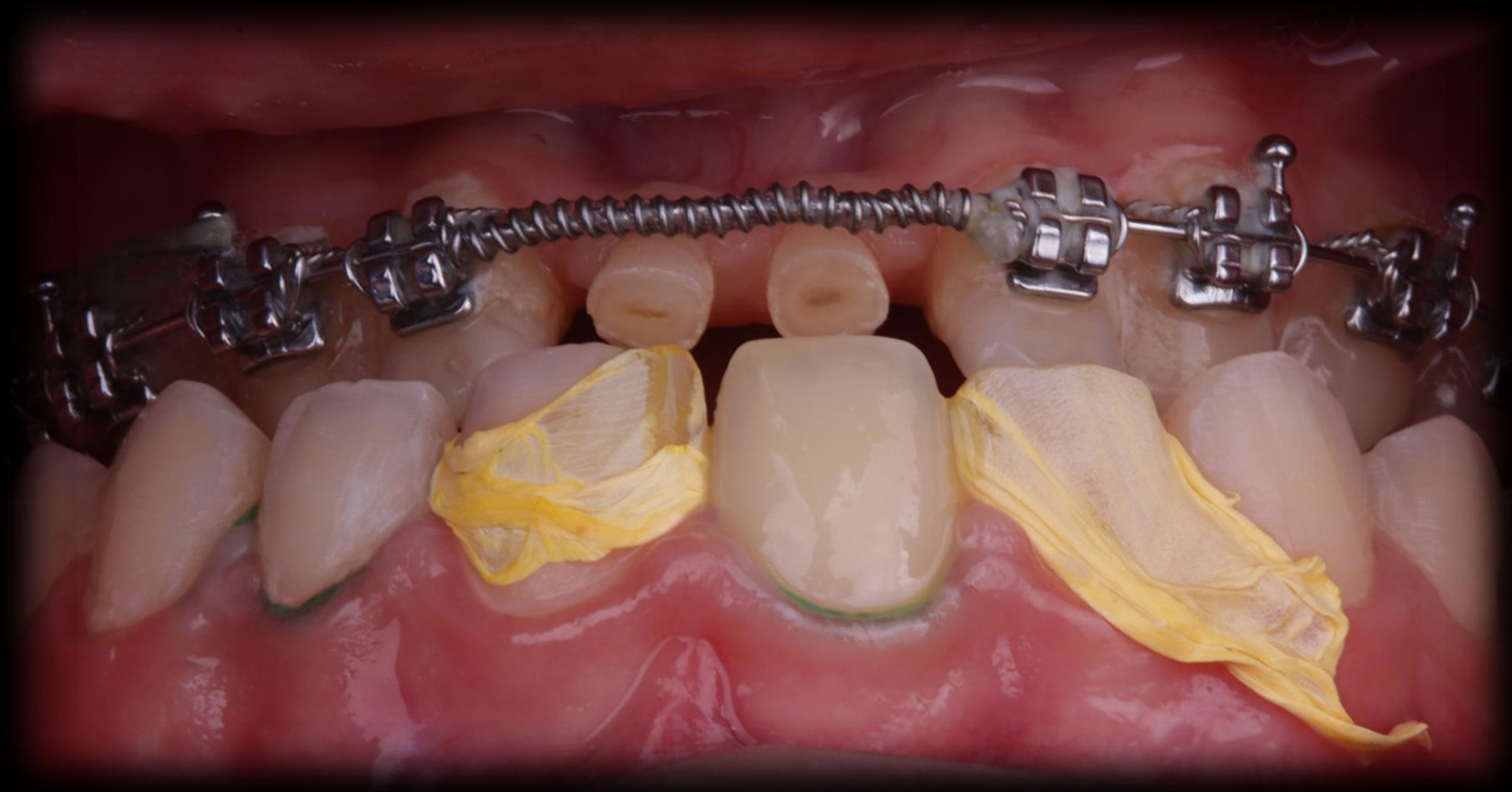
Working field isolated with polytetrafluoroethylene (PTFE) tape and a dental cord (tooth surface is etched).

✓ INTRA-ORAL PROTOCOL

Phosphoric acid etching.

apply acid etching 37% and rubbing the acid etch 20 second

✓ INTRA-ORAL PROTOCOL



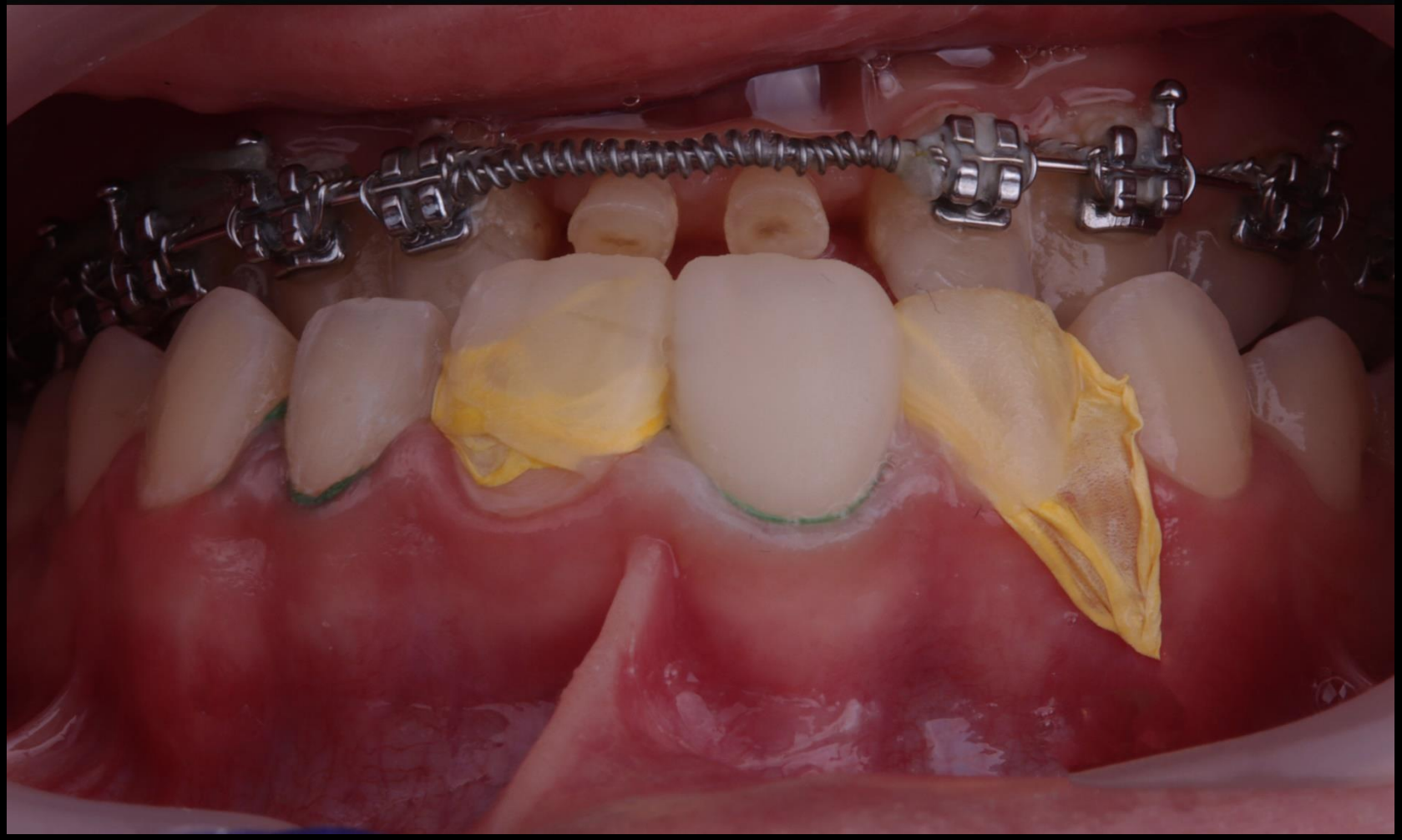
Palifique bond (Tokuyama brand)

✓ INTRA-ORAL PROTOCOL

light cure 10 second

✓ INTRA-ORAL PROTOCOL

Immediate piture after injecting flowable Omnichroma



✓ INTRA-ORAL PROTOCOL

IMMEDIATE PICTURES

After injecting of upper right central and upper left lateral insicors

✓ INTRA-ORAL PROTOCOL

IMMEDIATE PICTURE

After injecting of all anterior teeth with upper right and leftfirst premolars

INTRA-ORAL PROTOCOL

Polishing with EVE DiaComp Twist* grey 6000-8000 rpm

✓ INTRA-ORAL PROTOCOL

INTRA-ORAL PROTOCOL

Cotton buff on a contra-angled slow handpiece for glossy surface

✓ INTRA-ORAL PROTOCOL

FINAL RESULT AFTER TWO DAYS


FINAL RESULT
12 o'clock view

FINAL RESULT AFTER TWO DAYS

Detail of the texture created after finishing and polishing of the restored teeth

FINAL RESULT AFTER TWO DAYS

Detail of the texture created after finishing and polishing of the restored teeth

THANK YOU

The Prophet Mohammed (ﷺ)said, "No one of you becomes a true believer until he likes for his brother what he likes for himself".

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