

TECHNICAL INSTRUCTIONS

This is a descriptive manual of the technical steps, instructions and suggestions for the making of Deflex injectable dentures, using any of its materials

M10 XR Extra rigid polymer	CLASSIC SR Semi-rigid polyamide	FLUENCE SR Semi-rigid polyamide	SUPRA SF Semi-flexible polyamide	ACRILATO FD Injectable acrylic
--------------------------------------	---	---	--	--

Some of these instructions only apply to partial dentures, not complete dentures.

MAKING THE DENTURE

MODEL CASTING

It is recommended to make the models in **special plaster type III or type IV (Densita)**.

PARALLELIZATION OF THE MODEL

In the same way as with chrome, it is recommended to use a pendular parallelometer to look for the most favorable insertion axis, determining the dental equator, according to which the retainers we will be designed. Then, proceed to eliminate all the inconvenient or blind spots, applying wax and passing the rod of the parallelometer.

RETENTIVITY

Once the parallelization has been completed, use a spatula to even out the thickness of the wax found between the dental equator and the gingival pad, moving from the medial area toward the end of the retainer. This will give the dentures the necessary retentivity.

RELIEFS

Make reliefs in wax covering the gingival collars with a band of 1 mm to 1.5 mm.

DUPLICATE

Make a duplicate of the model to work on from this point forward.

Duplicates can be made with:

- ✓ Alginate
- ✓ Gelatin (for plaster)
- ✓ Silicone

*When using Gelatin or Alginate, submerge the model in water for 5 minutes.

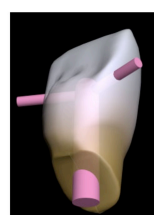
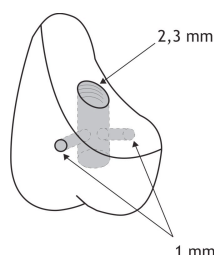
IMPORTANT! Do the casting with plaster type IV (Densita), which is able to withstand the pressure to be used in the injection.

OCCCLUSION PAD

Once the working model has been completed, we will make the occlusion pad.

ALIGNMENT – MECHANICAL RETENTION OF THE TEETH

- Minimum recommended thickness for the base plaque:
 - ✓ Upper dentures = 1.5 mm
 - ✓ Lower dentures = 3 mm
- Leave a minimum wax thickness of 1mm between the teeth's heel and the model, since the material must be able to pass through the space remaining between one and the other during the injection.
- Since Deflex material is translucent, it is advisable to file down the heels of the teeth, leaving the coronary height that is aesthetically pleasing, calculating a 1 mm allowance for insertion in the waxing.
- Perforations must always be made to provide mechanical retention, since chemical union alone is insufficient.



- Make the perforations with a straight bur. Do not use an inverted cone shape.
- The lateral retentions must be made proximally.
- These lateral retentions must be connected to the central retention.
- Recommendation: make the perforations after having filed down the heels of the teeth; not before.
- Do not apply wax to the retainers, as this will cause them to be warped during the test.

FINAL WAXING

In order for the retainers to have good resistance, memory and aesthetics, it is suggested that they be applied to the third section of the gingival area (the tooth's retentive area), covering part of the gums.

For injection, retainers require a minimum thickness of 1.5 mm. Once injected, we recommend leveling out the thickness from more to less, moving from the gingival area toward the tooth. This reduction in the area of contact with the tooth will provide a subtle finish to the retainer, as well as elasticity and greater translucence.

Occlusal supports

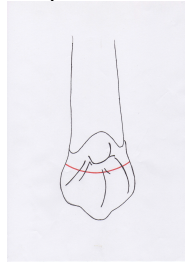
Rest seats: For the occlusal supports to be resistant, they must be wider and deeper than the ones made out of metal.

Recommended depth = 1.3 mm.

It is recommended to create a space by filing down the artificial tooth proximally through proximal orientation (adjoining the pillar tooth) to give greater body and resistance.

Supports in front teeth

Whenever possible, evaluate the possibility of making covering supports over the front teeth's cingulum. This design offers resistance, good load distribution and prevents leverage.



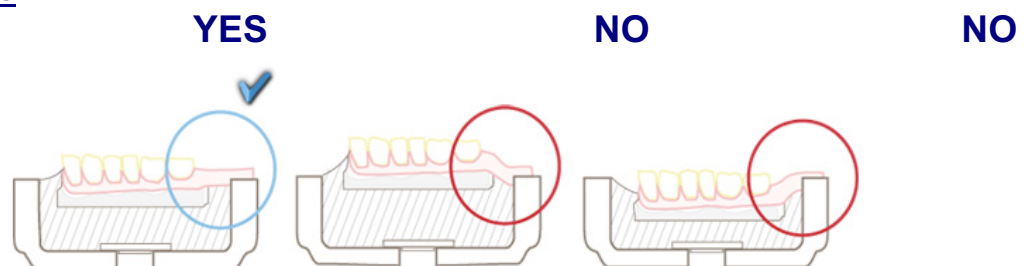
FLASK PLACEMENT

- Place a thin layer of solid Vaseline in the muffle and counter muffle.
- File the retentive areas of the plaster teeth.
- Bear in mind that the counter muffle is the one with three holes for airflow.

38 ml of water
200 g of special plaster type IV
Spatulate: 1 minute

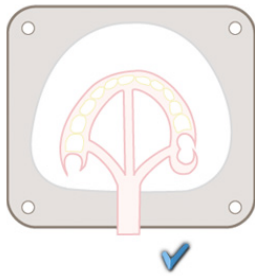
*The abovementioned quantities are approximate. Adjust the proportions according to the plaster type used.

INJECTION TUBES

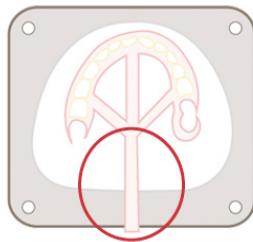


Make tubes out of wax. The tubes must be perfectly straight. In order to do so, the model must be placed on the same level as the injection entry way; it must be neither below nor above that level.

IMPORTANT! Do not leave the waxing flanks submerged in the plaster.



YES



NO

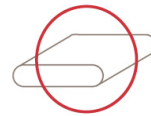
Place the model as close as possible to the entrance hole of the flask.



YES



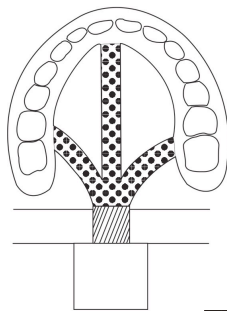
YES



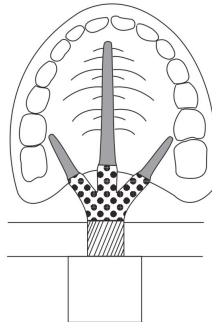
NO

Make the tubes in a round shape or a half-round shape. Flat tubes are not recommended, as the material will not have sufficient space to flow.

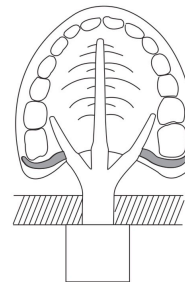
Lower dentures



Upper dentures



Secondary optional tubes
(Only for hard-to-reach areas)



= Entry tubes: 10 mm.

= Main tubes: 6 mm.

= Secondary or auxiliary tubes: 3 mm.

Entry tubes: 10 mm.

(Equal in diameter as the flask hole).

This is a wax pad that should only take up the entrance space of the flask.

Main tubes: 6 mm.

They start at the very entrance of the flask in such a way that as soon as the material enters the flask, it is distributed among the main tubes. These tubes must rest on the flask plaster, not suspend in the air.

Secondary or auxiliary tubes: 3 mm.

For upper dentures and areas that are hard for the material to reach.

The secondary tubes are placed on the waxed area. They must never be suspended in the air.

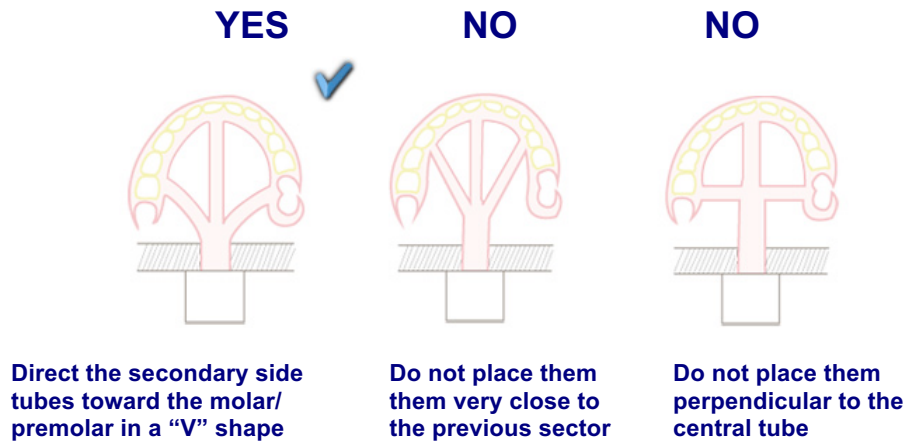


YES



NO

Progressive transition from the entry tube to the three main tubes.



COUNTER FLASK

- Apply the plaster separator.
- Introduce the counter flask and screw in. Remember that the screws must be located in the side with the counter flask.

66 ml of water
255 g of special plaster type IV
Spatulate: 1 minute

* The abovementioned quantities are approximate. Adjust the proportions according to the plaster type used.

CLEANING THE FLASK

- Loosen the screws two turns before washing
- Immersion time: 6 to 8 minutes

TUBE CORRECTION – CLEANING TOOTH PERFORATIONS

- Once the flask has been cleaned, it is necessary to eliminate any leftover film or excess plaster. This will prevent a plaster fragment from breaking in the injection and remaining in the denture.
- Check that each perforation made in the teeth (mechanical retention) is free and clean, since polyamide must be able to enter through it and allow the necessary fixing.

AIR LEAKS (Optional use)

These are channels that will relieve the injection compression.

They can be made out of wax, with tubes of 3 mm, or they can be directly made in the counter muffle plaster with a 3 mm bur. They must be placed opposite from where the injection takes place.

SEPARATOR FOR ACRYLIC

- Let the muffle cool down before applying the separator, so as to allow the humidity to be released from the plaster.
- 2 or 3 layers must be applied, according to the kind of separator used. It is important to let it dry completely between layers.
- Do not overuse the separator in any sector of the muffle, to avoid lumps.
- Let it dry out completely before injecting as humidity can affect the properties of the polyamide.

PREPARING THE FLASK FOR INJECTION

- Put the screws on the side of the flask (where the air holes are found).
- Ensure that there is no plaster or wax residue in the injection hole.

INJECTION

MATERIAL	Temperature	Injection time	Holding time	Air pressure
M10 XR	305°C / 581°F	15' Minutes	60" Seconds	5-7 kgs/cm ² = 5-7 Bar = 72-101 PSI
CLASSIC SR	280°C / 536°F	15' Minutes	60" Seconds	5-7 kgs/cm ² = 5-7 Bar = 72-101 PSI
FLUENCE SR	275°C / 527°F	15' Minutes	60" Seconds	4-5 kgs/cm ² = 4-5 Bar = 58-72 PSI
SUPRA SF	260°C / 500°F	15' Minutes	60" Seconds	3,5-4,5 kgs/cm ² = 3,5-4,5 Bar = 50-65 PSI
ACRILATO FD	265°C / 509°F	15' Minutes	60" Seconds	5-7 kgs/cm ² = 5-7 Bar = 72-101 PSI

! Note: Please follow instructions indicating the appropriate air pressure needed to inject the SUPRA SF and the FLUENCE SR which are less than that needed for the other Deflex materials.

THERMAL TREATMENT of the CLASSIC SF

CLASSIC SF	M10 XR - FLUENCE SR - SUPRA SF - ACRILATO FD
<p>VERY IMPORTANT! Submerge the denture without the plaster model for 15' minutes in boiling water, without cutting the injection tubes. This thermal treatment in the CLASSIC SF "releases" the tension of the thermo-injection, thereby making the material more resistant.</p>	<p>DO NOT PERFORM this thermal treatment on the other materials</p>

RETOUCHING AND POLISHING

CUTTING THE TUBES

Item:	Serrated steel disc
-------	---------------------

THICK RETOUCHING

Item:	Tungsten Carbide Drill (with red ring crossed multi-blade)
-------	--

Optional element: Conventional stones.

ELIMINATING EXCESS

Item:	Steel brush (made of thin and soft threads)
Use	Low speed

FINE RETOUCHING

Option A	Abrasive rubber
Option B	Waterproof sandpaper No. 240 and No. 600
Use	Cut in strips of 15 cm in length x 2 cm in width, place in a sandpaper mandrel, and roll them up. Use at low speed.

POLISHING

Item	Waterproof sandpaper No. 1000 and No. 1500
Use	Cut in strips of 15 cm in length x 2 cm in width, place in a sandpaper mandril, and roll them up. Use at low speed.

IMPORTANT!

Sandpapers No. 1000 and No. 1500 can be used as an alternative or complement to pumice stone. A convergent bristle brush of 2 and 4 rows is recommended.

GLOSS

Item	High Gloss Paste
Use	Use a cloth or fabric wheel. The denture must be clean (without any pumice residue) and dry. Polish with intermittent horizontal sweeping movements so as to not overheat the material.

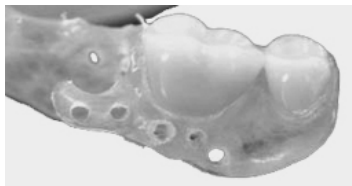
ADDITIONS, RELINES AND REMOUNTS

IMPORTANT!

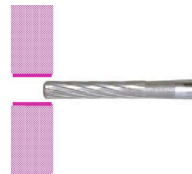
For materials that chemically bond with acrylic - M10 XR and ACRILATO FD - conduct repairs in the same way as for conventional acrylic dentures.

For materials that do NOT chemically bond with acrylic - CLASSIC SF; FLUENCE SR and SUPRA SF - mechanical retention using perforations is necessary.

MATERIAL	M10 XR	CLASSIC SF	FLUENCE SR	SUPRA SF	ACRILATO FD
Chemical bond	YES	NO	NO	NO	YES



MECHANICAL RETENTION USING PERFORATIONS



STEP 1: STRAIGHT PIERCING PERFORATION



STEP 2: SUPERFICIAL MILLING OF LARGER DIAMETER

ADDITION THROUGH RE-INJECTION

Ask the dentist for a pickup impression with the denture in place.

Lightly level off the surface in the area where the repair will be made, making sure to not reduce the thickness too much. Make piercing perforations of 1 mm to 2 mm in diameter for mechanical retention. Then mill superficially with a larger diameter bur on the inside as well as the outside, creating retention in the form of a rivet. Make the mechanical retentions on the tooth. Wax the addition. Place in the flask, directing the waxed area toward the entry hole, covering the all of the denture that has already been injected with plaster, leaving only the waxed part and the addition's tooth exposed. Insert the wax tube, complete the counter flask, inject, retouch and polish.

ADDITIONS WITH SELF-CURING ACRYLIC

Ask the dentist for a pickup impression with the denture in place.

Lightly level off the surface in the area where the repair will be made, making sure to not reduce the thickness too much. Make piercing perforations of 1 mm to 2 mm in diameter for mechanical retention. Then mill superficially with a larger diameter bur, to create retention in the form of a rivet. Apply cyanoacrylate in the sector of the addition as a bonding agent. Let dry 1 minute. Prepare the acrylic to be placed in the repair. Moisten the tooth with liquid to allow for chemical adhesion. Place the acrylic giving it the desired shape and pressurize. Retouch and polish using the conventional methods.

IMPORTANT!

Prior to using a cyanoacrylate-based adhesive for the reparation of a dental denture, the use information provided by the adhesive manufacturer should be read to verify that it is suitable for permanent contact with the oral mucosa.

RELINES WITH ACRYLIC

Level off the internal surface and the denture borders. Make superficial (not cross-through) mechanical retentions. Paint the entire reline surface with cyanoacrylate, and let it dry for 1 minute. Apply the acrylic in a plastic state and pressurize. Retouch and polish in the conventional way.

Suggestion:

Make a guide so as not to alter the occlusion and the positioning of the denture in the mouth.

CHROME COMBINED WITH DEFLEX

When placing it in the muffle, cover the retentive area and the chrome with plaster, leaving only the wax and the acrylic teeth uncovered. Place a tube for each sector and inject with thermo-plastic material. Retouch and polish in the conventional way.

Suggestions:

- It is recommended to make the frame with all the retainers, since this will make the fixing and positioning easier during the test in the mouth that will be carried out by the dentist.
- The metallic retainers that will be replaced by thermoplastic material must be cut before the alignment.
- It is best to NOT allow the chrome base extent too far towards the vestibular area, in order to prevent the metal from showing. That is, it is not necessary to extend the vent towards the vestibular area as much as is done when using acrylic, since the high resistance of Deflex materials will offer enough fixing, without any risk of breaking.
- In the event that the chrome grate is visible and compromises the aesthetics in the front area, Opaquer can be applied.



Manufacturer

Sitio de Montevideo 2381

Lanús (C.P.:1824) - Buenos Aires - Argentina

Tel.: (+5411) 4812-9638