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SILICONE LABORATORY MODELS

Revolutionary, simple, clean and practical alternative to the use of plaster in the Orthodontic Clinic.

This article intends to simplify and optimize a daily clinical activity of the orthodontist, advocating the use of condensation or addition silicone for "model cast" using orthodontic alginate with excellent quality.

Author's choice: Hidrogum 5 Zhermach, which is kept in Ziplock closed plastic bags and holds properties for 5 days, also has precision for the application of the technique. The author also indicates, but not necessarily, mechanical alginate spattering in a centrifuge.

CHARACTERISTICS OF THE VARIOUS TYPES OF NON-MARKET SILICONES:

1. There are various types of silicones with different properties and hardness levels.
2. Shore hardness A from 75 to 95.
3. The author indicates the use of the silicones of hardness Shore A 95 because it has characteristics similar to the special plaster.
4. High initial fluidity.
5. Good final hardness.
6. High detail reproduction.
7. Inert to all resins (180° C)
8. It does not suffer from deformation, excellent resistance to breakage.
9. Resistance to heat (180° C)
10. High tensile strength.
11. The condensation silicone is activated with gel or liquid catalyst, and the addition silicone is activated by adding the A-paste and the B-paste in equal portions.
12. CAD compatible.
13. White color (accepts dyes).
14. Handling characteristics:
 - a. Mixing time: 30"
 - b. Total working time: (23 ° C 73 ° F): 2 'to 2.5
 - c. Hardening time (23 ° C 73 ° F): 6 '
 - d. Shore A hardness after 24h: 90
 - e. Detail reproduction: 20 micrometers
 - f. Dimensional stability -0.10%
 - g. Compression deformation; <1%
 - h. Elastic recovery: 99%

LABORATORY INDICATIONS IN THE ORTHODONTIC CLINIC:

1. Quick preparation of models for orthodontic diagnoses, being indicated for the clinic or radiological clinics, and can also be used in articulators, pre-shaped bases and gnathostats
2. Manufacture of orthodontic and functional orthopedic appliances
3. Manufacture of orthodontic appliances that require band transfer and sales
4. Making bite plates of any kind
5. Containment appliance
6. Manufacture of sports buckets
7. Manufacture of silicone positioners type OSAMU or similar
8. Practical and quick creation of set-ups
9. Making transfer plates for indirect vestibular or lingual bonding
10. Manufacture of surgical guides
11. Manufacture of sleep apnea appliance
12. Preparation of positioners for bonding of containment wires
13. Making conditions (use in case of agenesis or missing elements)
14. Making Transparent Orthodontic Aligners (DELMAN technique)

ADVANTAGES OF SILICONE:

1. Speed: you can have a model ready for use in 7 minutes,
2. Cutting: can be done with the use of stiletos in an easy and clean way (It does not need trimmer)
3. Cleaning and saving space and time
4. It facilitates much the withdrawal of the devices of the models (easy take off)
5. Do not break your teeth!
6. Can be colorized to identify different treatment steps
7. The teeth can be separated with stylet or scalpel making it much easier to make set-ups
8. Extremely efficient in the creation of transparent Aligners, allowing to carry out the process of attendance or session of session or session of session
9. Good cost / income ratio; Even though it is a bit more expensive than plaster
10. Excellent for the archiving of study or work models

Note from author:

Although CAD CAM technology has come to replace the usage of moldings and models, the use of the silicone model technique is quick and easy to use and, above all, simple.

Making an Analogy

COLOMBO's EGG is a popular expression in Brazil that means that something very difficult to realize, seems very easy, once it is realized, it is also a metaphor used to be said that anyone has accomplished the feat.

When we use this expression, we are saying that the person has discovered something that will give many benefits.

Origin of expression

Colombo' egg is an expression that has two versions for its origin. In Spain, after the discovery of America, Columbus is honored with a banquet. Some of those people belittled the feat and said that any person could achieve this.

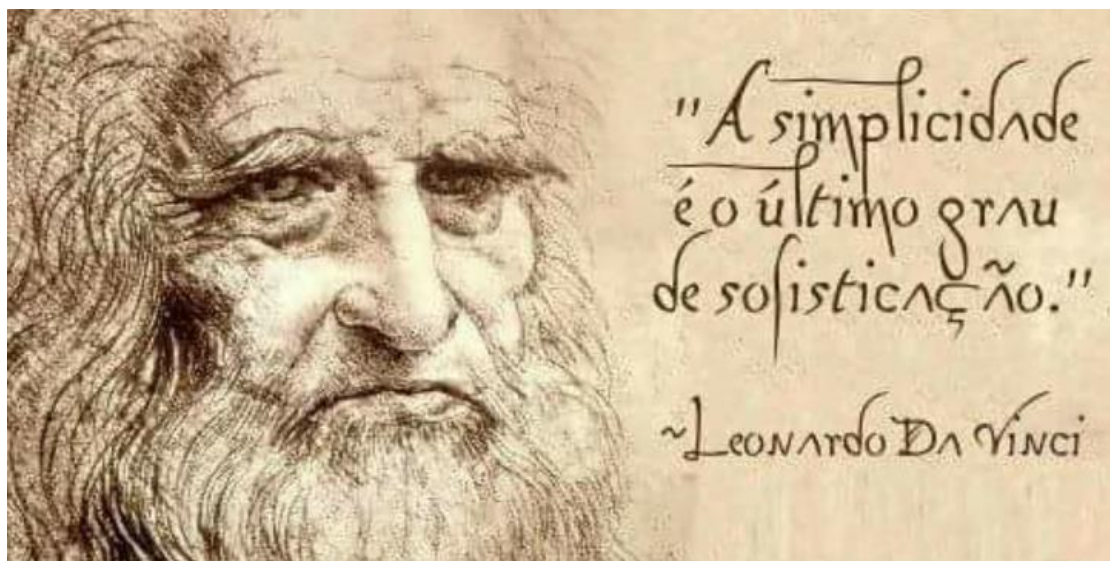
Columbus challenged them stand an egg. Nobody done. Colombo slammed the egg on a table, kneading one side, which enabled the egg to stand, and said, "Anyone else can do, but before it is necessary someone have the idea".

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In Italy, some historians claim that it was the architect Filippo Brunelleschi, who refused to show his design for the dome of the Cathedral of Santa Maria del Fiori in Florence and challenged some architects to stand an egg. Filippo slammed the egg on the table, kneading one side, and the egg stood up.

The architects argued that they could do the same, and Filippo said they could copy their project in the same way.

The author compares the use of silicones for models to an Egg of Colombo in the Orthodontic Clinic, since these types of laboratory silicones have been used for a long time by labor technicians and dentists.



The FLEX MODEL SYSTEM with (addition or condensation silicone) for the replacement of gypsum in most applications, brings the orthodontic clinic many advantages: speed, cleaning, precision, saving time, less dependence on laboratories, etc.

The addition and condensation silicones of the author's preference are chosen for the quality and ease of handling for the correct use in the FLEX MODEL system.

Performance of the FLEX MODEL System: 1 kg can yield up to 50 models, with an average cost of R\$1,70 per model.