**The Two-Piece Wax Bite SCP Registration Technique**

**(With Deprogramming And No Mandibular Manipulation)**

**Frank E. Cordray DDS, MS**

The overall technique is, in part, a clinical application of the findings of numerous investigators, including Lundeen 1972 ***37***, Williamson 1977 ***3***, Huffman 1978 ***4***, Beard and Clayton 1980 ***25***, Teo and Wise 1981 ***38*,** Lucia 1983 ***39*,** Girardot 1987 ***15***, Howat, Capp, and Barrett 1991 ***26***,Fenlon and Woeffel 1993 ***40*** , Wood 1994 ***18***, Roth 1995 ***13***, Karl and Foley 1999 ***19***, Greco and Vanarsdall 1999 ***41*** and Dawson 2007 ***31***. The bite registration is taken immediately after neuromuscular deprogramming (relaxation). A 2-piece wax registration incoporating anterior resistance (a hard anterior stop) generates activity of the mandibular elevator muscles and avoids posterior tooth contact, allowing condylar seating in a reproducible musculo-skeletal position without dental interference or deflection. No attempt is made to direct mandibuar closure or influence positioning of the mandibular condyles.

The wax bite is taken with Delar Bite Registration Wax (Blue Bite Registration Wax, Delar Corp,

Lake Oswego, OR [*www.****delar****.com*](http://www.delar.com)800.669.7499) within the hinge axis rotation phase of closure

(< 20 mm) and is prepared in two sections. The anterior section is made by folding over the softened

wax to form 4 layers (more, in case of anterior open bite). The antero-posterior dimension of the

anterior wax section is dictated by the overjet (AP difference in upper to lower incisor teeth

anteriorly), and the width should include both the upper and lower anterior teeth (cuspid to cuspid).

The posterior section is two layers thick. The antero-posterior dimension is trimmed wide enough to

include the first molar and second premolar teeth, and it does not extend too far buccally to be distorted

by the cheek nor too far anteriorly to interfere with the anterior section of wax.

**THE PROCEDURE**

1. The subject is seated in the dental chair and positioned at a 45-degree angle to the floor.

2. The subject is instructed to bite continually with a moderate pulsating biting force (5 seconds clench, 5 seconds relax) on a wooden tongue depressor for 5 to 10 minutes to modify the neuromuscular engram. The wax registration of the SCP is taken immediately following deprogramming.

3. The anterior section of wax (4 thicknesses) is softened in a water bath at 135 degrees Fahrenheit, then placed and held against the maxillary anterior teeth with one hand. The operator places the thumb of the free hand on the chin while the middle and index fingers lightly contact the angle of the mandible bilaterally. The subject is then instructed to “Lightly close on your back teeth” and is allowed to close without protrusion on a reproducible mandibular arc until approximately 2-3 mm of posterior vertical separation/clearance is observed between the upper and lower posterior-most teeth. The subject is instructed to hold this position. The anterior section of wax is chilled with air, hardened to the point where it can be removed without distortion, and is then removed. The anterior section is further hardened in ice water and trimmed to allow passive indexing of the mandible into the SCP position. The subject is NOT permitted to close the teeth together into intercuspation (the ICP) until the registration is completed.

4. The posterior section (two thicknesses) is heated in the water bath until it is completely soft (would offer no resistance to closure) and then placed on the upper teeth and supported with the fingers on the buccal surfaces. While holding the posterior section in place, the chilled anterior section is replaced on the upper anterior teeth without contacting the posterior section. This can be supported with the same hand that is holding the posterior section.

5. The mandible is allowed to close into the SCP as above with the free hand. The lower anterior teeth should index into the hardened anterior section of wax without any (anterior) slide into the indentations. As the subject closes into the hardened anterior section, he/she is instructed to “close firmly and hold.” The condyles seat as the subject closes into the hardened anterior stop, and the posterior teeth hinge closed against no resistance. The posterior section is chilled with air. When the posterior section has hardened sufficiently to avoid distortion upon removal, both wax sections are removed. Both sections are further hardened in ice water.

6. The 2-piece wax record is inspected to ensure the absence of cusp penetration into the wax. It is

then trimmed with a sharp scalpel blade to the incisal edge for cusp tip indexing when mounting the

lower dental cast into the SCP.

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