1. Futar Occlusion/ Futar D Kettenbach
2a. Affinity Quick Bite Clinician’s Choice
2b. Exabite II NDS GC
2c. MegaBite Discus
3a. Registrado X-tra Voco
3b. Star VPS Heavy Stiff Bite Danville Materials
3c. Stone Bite Dreve
4a. Blu-Mousse Parkell
4b. Imprint Bite 3M ESPE
4c. Jet Bite Coltene/Whaledent
4d. LuxaBite DMG/Zenith
4e. Memoreg 2 Heraeus Kulzer
4f. Vanilla Discus
5a. Correct Bite Pentron
5b. Milk Chocolate Discus
5c. Twinz VPS Bite Bisco
6. Genie Bite Sultan Chemists
7a. Regisil Rigid Dentsply/Caulk
7b. Take 1 Bite sds/Kerr
<table>
<thead>
<tr>
<th>Product</th>
<th>Mixing Tips Per Cartridge</th>
<th>Cost/ml</th>
<th>Adequate Working Time for Full Arch?</th>
<th>Mouth Removal Time (From Start of Mix)</th>
<th>Color</th>
<th>Hardness (Shore A @ 24 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Futar D/Futar Occlusion Kettenbach</td>
<td>6</td>
<td>$0.38</td>
<td>Yes</td>
<td>Futar D Fast: 45 seconds</td>
<td>Purple</td>
<td>89.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Futar D Occlusion: 2 min</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Futar Occlusion: 1.5 min</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affinity Quick Bite</td>
<td>3</td>
<td>$0.37</td>
<td>No</td>
<td>50 seconds</td>
<td>Purple</td>
<td>87.4</td>
</tr>
<tr>
<td>Clinician’s Choice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exabite II NDS GC</td>
<td>6</td>
<td>$0.36</td>
<td>Yes</td>
<td>1 minute</td>
<td>Baby Blue</td>
<td>81.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MegaBite Discus</td>
<td>6</td>
<td>$0.33</td>
<td>Marginal</td>
<td>55 seconds</td>
<td>Teal</td>
<td>91.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registrado X-tra Voco</td>
<td>5</td>
<td>$0.33</td>
<td>Yes</td>
<td>40 seconds</td>
<td>Blue</td>
<td>86.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Star VPS Heavy Stiff Bite Danville Materials</td>
<td>3</td>
<td>$0.28</td>
<td>Yes</td>
<td>50 seconds</td>
<td>Light Blue</td>
<td>87.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blu-Mousse Parkell</td>
<td>5</td>
<td>$0.30</td>
<td>Super Fast: Yes</td>
<td>Super Fast: 40 seconds</td>
<td>Super-Fast: Aqua</td>
<td>92.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Classic: Yes</td>
<td>Classic: 2.25 minutes</td>
<td>Classic: Light blue</td>
<td></td>
</tr>
<tr>
<td>Imprint Bite 3M ESPE</td>
<td>5</td>
<td>$0.45</td>
<td>Yes</td>
<td>1.25 minutes</td>
<td>Blue</td>
<td>74.9</td>
</tr>
<tr>
<td>Jet Bite Colte/Whaledent</td>
<td>5-6</td>
<td>$0.40</td>
<td>Reg: Yes</td>
<td>Reg: 1.25 minutes</td>
<td>Reg: Yellow</td>
<td>81.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fast: Yes</td>
<td>Fast: 1.25 minutes</td>
<td>Fast: Light Peach</td>
<td>77.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LuxaBite DMG/Zenith</td>
<td>15</td>
<td>$2.30</td>
<td>Yes</td>
<td>2 minutes</td>
<td>Blue</td>
<td>20.2 (Knoop)</td>
</tr>
<tr>
<td>Memoreg 2 Heraeus Kulzer</td>
<td>6</td>
<td>$0.38</td>
<td>Yes</td>
<td>1 minute</td>
<td>Pink</td>
<td>88.6</td>
</tr>
<tr>
<td>Vanilla Discus</td>
<td>6</td>
<td>$0.30</td>
<td>Yes</td>
<td>55 seconds</td>
<td>White</td>
<td>89.2</td>
</tr>
<tr>
<td>Correct VPS/Correct Plus Bite</td>
<td>3.75</td>
<td>$0.19</td>
<td>Yes</td>
<td>Correct Plus/Super Fast: 45 seconds</td>
<td>Purple</td>
<td>81.9</td>
</tr>
<tr>
<td>Pentron</td>
<td></td>
<td></td>
<td></td>
<td>Correct VPS/Regular: 2.5 min</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk Chocolate Discus</td>
<td>5</td>
<td>$0.30</td>
<td>Yes</td>
<td>1.5 minutes</td>
<td>Brown</td>
<td>84.4</td>
</tr>
<tr>
<td>Twinz VPS Bite Bisco</td>
<td>5</td>
<td>$0.29</td>
<td>Yes</td>
<td>1 minute</td>
<td>Copper</td>
<td>71.2</td>
</tr>
<tr>
<td>Genie Bite Sultan Chemists</td>
<td>3</td>
<td>$0.25</td>
<td>Yes</td>
<td>Super Fast: 1 minute</td>
<td>Light Blue</td>
<td>86.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fast: 1.5 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regisil Rigid Dentsply/Caulk</td>
<td>3</td>
<td>$0.45</td>
<td>Yes</td>
<td>1.25 minutes</td>
<td>Light Purple</td>
<td>86.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take 1 Bite sds/Kerr</td>
<td>3</td>
<td>$0.36</td>
<td>Yes</td>
<td>50 seconds</td>
<td>Lime Green</td>
<td>85.1</td>
</tr>
</tbody>
</table>
If dental materials had sex appeal, bite registration products would be near the bottom of the list. This is the type of material that we all take for granted. While old standbys such as plaster and wax can still be used, vinyl polysiloxane mousse-type materials dominate this category, although one bis-acryl composite has invaded this territory. These materials need to set quickly, be reasonably stiff, and trim cleanly.

Testing was done on the following qualities:

**Wettability**
When syringed onto occlusals of teeth, does the material stay put or can patients displace it with their tongues? Most of our *CHOICES* were not displaced, except for Blu-Mousse Classic and LuxaBite, probably because of their slower set times.

**Flexibility**
If it flows into an undercut, can it be removed without fracturing? Yes, for most of our *CHOICES* and, occasionally, some of the other materials. LuxaBite, with its very rigid set, cannot be removed from an undercut, period.

**Brittleness**
When trimming the excess, can it be done without breaking? Yes, for most of our *CHOICES* if you use a sharp scalpel. Occasionally, one will fracture, depending on how thick it is. LuxaBite requires a rotary instrument for trimming, but it is still very brittle.

**Consistency and Handling**
All products scored 5 (least flow) in our flow test. This does not necessarily mean they have identical viscosities, just that none of them could be considered runny.

**Adequate Working Time for Full Arch**
On a test patient, we took full arch and quadrant bite registrations. For the full arch, it took approximately 15 seconds to dispense the material (which is less time than any product’s working time), while quadrants only required no more than 10 seconds. If the two were visually similar, with the same penetrations due to occlusal contacts, we concluded the material was adequate to register a full arch. However, if the quadrant showed more penetrations than the full arch, we concluded that the material was already starting to set and it would not be prudent to use it for full arch registrations. If this was the case and you needed a bilateral bite, you should register one side at a time. With the fast set materials, this would only take another minute or so, which is not much of an inconvenience.

**Mouth Removal Time**
After dispensing the material intraorally for a quadrant (about 10 seconds), we checked the material in the mouth with an instrument after 15 seconds (from the time the patient occluded into the material) and then every 10 seconds. When the material “felt” set, we removed the bite. If it still felt rubbery, we allowed it to set an additional 10 seconds and then checked it again.

We then repeated this test by dispensing the materials between glass slides using the temperature/humidity chamber as an intraoral simulator. The time for dispensing and placing it into the temperature/humidity chamber was about 10 seconds (similar to intraoral delivery). The materials were removed from the temperature/humidity chamber and the resulting disks were removed from between the glass slides and tested for relative hardness using a digital durometer reading in Shore A units. The higher the reading, the harder the material.

We used as test periods the time we found the material was hard in the mouth as well as at the manufacturer’s recommended time. These readings were also taken after 24 hours on the benchtop (to simulate the hardness when the lab received the bite). While we did not correlate the results with clinical accuracy, it is logical to assume that a material, which is more completely polymerized, should be less likely to distort and, therefore, waiting an additional few seconds to assure this set may be prudent. In other words, you should choose as the safest mouth removal time that which comes closest to the 24 hour hardness.

We also assessed whether the manufacturer included enough mixing and spreader tips (if applicable) in the kit. Our calculations found that each cartridge of material should be adequate for about 11 bite registrations from the canine to the second molar. We realize that some bites are going to be for 1-2 teeth or for a full arch, but the coverage we tested was meant to be a compromise between these extremes. Therefore, unless you always take a full arch bite, a kit should include roughly 11 mixing tips for each cartridge.

Unfortunately, only one product comes with an adequate supply of mixing tips. Some manufacturers are downright stingy when it comes to providing even a bare minimum. We have listed the number of mixing tips per cartridge for you to compare.

Many of the products in this group are quite similar, with only slight differences in set times and viscosity. Granted, some are definitely harder and some are more flexible than others. Or you may want a product that sets in the least amount of time. Nevertheless, many of the products in this group could be used interchangeably.
Futar D/Futar Occlusion
Kettenbach

**Color**
Futar D Fast  Hot pink.
Futar D Occlusion  Fuchsia.
Futar Occlusion  Mint green.

**Adequate Working Time for Full Arch**
Futar D Fast  Yes.
Futar D Occlusion  Yes.
Futar Occlusion  Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th>Futar D Fast</th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>60 seconds</td>
<td>88.6</td>
</tr>
<tr>
<td><strong>RRL</strong></td>
<td>45 seconds</td>
<td>86.7</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>88.1</td>
</tr>
</tbody>
</table>

**RAVES & RANTS**
+ Three choices
+ Fashion colors
- Names are confusing
- D Fast has gritty feeling

**Cost**: $37.50 ($0.38/ml)
**Includes**:
- 2 cartridges (50ml ea)
- 12 mixing tips (6 per cartridge)

**Shelf Life**: 2 years
**MSDS**: Not included

---

**Futar D Occlusion**

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>2 minutes</td>
</tr>
<tr>
<td><strong>RRL</strong></td>
<td>1.25 minutes</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
</tr>
</tbody>
</table>

**Futar Occlusion**

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>1.5 minutes</td>
</tr>
<tr>
<td><strong>RRL</strong></td>
<td>1.25 minutes</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
</tr>
</tbody>
</table>

**Taste**
Neutral.

**Packaging**
All versions come in conventional cardboard boxes with the tips in their cardboard box. The cartridges have the expiration date, but do not have the working or setting time on the moisture-resistant labels. The expiration date is also on the sides of boxes. There is no color-coding on the syringes, but the Futar Occlusion box has a green accent while the other versions are red. Futar D has the Occlusion suffix on the cartridge, but not the box.

**Directions**
All versions have small folded sheets of plain paper in six languages. Working and setting times are reasonably easy to find.

---

Affinity Quick Bite
Clinician’s Choice

**Color**
Purple.

**Adequate Working Time for Full Arch**
No.

**Cost**: $36.95 ($0.37/ml)
**Includes**:
- 2 cartridges (50ml ea)
- 6 mixing tips (3 per cartridge)

**Gun**: $74.95
**Shelf Life**: 3 years
**MSDS**: Included

**RAVES & RANTS**
+ Cool color
+ Very hard
- Expiration date can be removed during disinfection
- Should not use for full arch

---
Color
Baby blue.

Adequate Working Time for Full Arch
Yes.

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>55 seconds</td>
<td>85.1</td>
</tr>
<tr>
<td>RRL</td>
<td>50 seconds</td>
<td>83.2</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>89.6</td>
</tr>
</tbody>
</table>

Packaging
Cardboard box with cardboard insert in the middle of the inside of the box, with holes for the mixing tips. Cartridges are placed on both sides of the cardboard insert. Non-clogging cartridges have the expiration date on the label, as well as working and setting times. The label itself is moisture-resistant, but the expiration and lot number are stamped on the label and can be rubbed off in the disinfection process.

Directions
Plain paper in simple tri-fold design. Working and setting times are displayed in the middle of the fold-out.

Taste
Officially neutral, but our testers reported a slight minty taste.

Packaging
Cardboard box with tips in sealed plastic bag. Non-clogging cartridges have the moisture-resistant expiration date imprinted directly on them, but no working or setting times. The label itself is moisture-resistant, but the expiration and lot number are stamped on the label and can be rubbed off in the disinfection process.

Directions
Plain paper in simple tri-fold design. Working and setting times are clearly indicated at the beginning of the instructions, plus clinical photos show its use in the mouth.

Cost
Kit: $34.95 ($0.36/ml)
Includes:
• 2 cartridges (48ml ea)
• 12 mixing tips (6 per cartridge)
Shelf Life: 3 years
MSDS: Not Included
**Color**
Teal.

**Adequate Working Time for Full Arch**
Marginal.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>55 seconds</td>
<td>92.1</td>
</tr>
<tr>
<td>RRL</td>
<td>45 seconds</td>
<td>84.9</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>91.7</td>
</tr>
</tbody>
</table>

**Taste**
Neutral.

---

**Cost:** $32.00 ($0.33/ml)

**Includes:**
- 2 cartridges (48ml ea)
- 12 mixing tips (6 per cartridge)

**Shelf Life:** 2 years

**MSDS:** Not included

**Packaging**
Cardboard box with cardboard insert in the middle of the inside of the box, separating the mixing tips from the cartridges. Non-clogging cartridge labels have the setting time, but the expiration date is on a separate sticker that is easily rubbed off in the disinfection process.

**Directions**
Printed on outside of boxes as well as paper insert listing information for various renditions of Discus impression and bite registration materials. But specific information for this product is hard to locate on these types of general product line instructions. The copy outside the box states that it can be used as a matrix material, but no instruction is given on this utility. Cartridge indicates set time is 55 seconds, while directions state one minute. The set time is also indicated as total time “from mix to final set”, but you don’t really know if this means from the beginning of mixing or after mixing.
**Registrado X-tra**

Voco  
www.voco.com/usa

**RAVES & RANTS**

- Very fast set
- Nice spreader tips
- 10 mixing tips but only 5 spreaders?
- Unpleasant taste

<table>
<thead>
<tr>
<th>Adequate Working Time for Full Arch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mouth Removal Time (from start of mix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Manufacturer/RRL</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Cost: $32.95 ($0.33/ml)

Includes:
- 2 cartridges (50ml ea)
- 10 mixing tips (5 per cartridge)
- 5 spreader tips (2.5 per cartridge)

Shelf Life: 2 years

MSDS: Included

**Taste**

Unpleasant.

**Packaging**

Cardboard box with tips in Ziploc bags. Non-clogging, moisture-resistant cartridge labels do not have the working and setting times, but do have the expiration date.

**Directions**

Plain paper folded sheet combined with information on the impression material of the same name. Very basic.

---

**Star VPS Heavy Stiff Bite**

Danville Materials  

**RAVES & RANTS**

- Fast set
- Inexpensive
- Expiration date dissolved by disinfection
- Another “blue” bite

<table>
<thead>
<tr>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light blue.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adequate Working Time for Full Arch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mouth Removal Time (from start of mix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Manufacturer/RRL</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Cost: $55.95 ($0.28/ml)

Includes:
- 4 cartridges (50ml ea)
- 12 mixing tips (3 per cartridge)

Shelf life: 3 years

MSDS: Included

**Taste**

Neutral.

**Packaging**

Cardboard box with tips in Ziploc bag. Non-clogging cartridge labels have the working and setting times, as well as the expiration date that is easily rubbed off in the disinfection process.

**Directions**

Coated paper folded sheet combined with information on the impression material of the same name. Very basic.
StoneBite
Dreve
www.dreve.com

**Color**
Fluorescent orange.

**Adequate Working Time for Full Arch**
Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>80 seconds</td>
<td>73.3</td>
</tr>
<tr>
<td>RRL</td>
<td>60 seconds</td>
<td>62.4</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>92.4</td>
</tr>
</tbody>
</table>

**Cost:** $34.95 ($0.35/ml)

**Includes:**
- 2 cartridges (50ml ea)
- 12 mixing tips (6 per cartridge)
- 12 spreader tips (6 per cartridge)

**Shelf Life:** 2 years

**MSDS:** Not included

**RAVES & RANTS**
- Hardest @ 24 hours
- Nice spreader tips
- Doesn’t stack as well as others—slightly runny
- Fairly brittle—does not trim cleanly

Blu-Mousse
Parkell

**Color**

- Super Fast: Aqua blue.
- Classic: Light blue.

**Adequate Working Time for Full Arch**

- **Super Fast:** Yes.
- **Classic:** Yes.

**Taste**
Unpleasant.

**Packaging**
Cardboard box with tips in Ziploc bags. Non-clogging cartridge labels have the setting times, but do have the expiration date that is easily rubbed off in the disinfection process.

**Directions**
All versions have small folded sheets of coated paper in five languages. Working and setting times are reasonably easy to find.

**Cost:** $34.95 ($0.35/ml)

**Includes:**
- 2 cartridges (50ml ea)
- 12 mixing tips (5 per cartridge)
- 12 spreader tips (6 per cartridge)

**Shelf Life:** 2 years

**MSDS:** Included

**RAVES & RANTS**
- Tied for fastest set
- The Original Mousse
- Hard to find language of choice in directions
- Classic can be displaced by tongue

NEW
**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td></td>
</tr>
<tr>
<td>40 seconds</td>
<td>82.6</td>
</tr>
<tr>
<td>24 hours</td>
<td>81.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td></td>
</tr>
<tr>
<td>2.25 minutes</td>
<td>75.3</td>
</tr>
<tr>
<td>2 minutes</td>
<td>65.1</td>
</tr>
<tr>
<td>24 hours</td>
<td>79.8</td>
</tr>
</tbody>
</table>

**Taste**

Neutral.

**Packaging**

Cardboard boxes, with the only difference between the two versions is the aqua-color label on the lid for the Super Fast while the Classic version has a blue label. The cartridges have the expiration date and setting time on the moisture-resistant labels, which are also color-coded. The expiration date is also on the top of the box.

**Directions**

Plain paper in 12 languages. Hard to find language of choice.

---

**Introductory Kit**

Cost $89.70 ($0.45/ml)

- 4 cartridges (50ml ea)
- 20 mixing tips (5 per cartridge)

**Shelf Life:** 2 years

**MSDS:** Not included

---

**Color**

Blue.

**Adequate Working Time for Full Arch**

Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td></td>
</tr>
<tr>
<td>1 minute</td>
<td>42.9</td>
</tr>
<tr>
<td>1.25 minutes</td>
<td>64.5</td>
</tr>
<tr>
<td>24 hours</td>
<td>74.9</td>
</tr>
</tbody>
</table>

**Imprint Bite**

3M ESPE

(3.9)

---

**Raves & Rants**

- No need to rush
- Tips well-organized in box
- Stated MRT may be too optimistic
- Least hard at suggested MRT

**Taste**

Neutral. One patient thought it had a "sand-like" texture.

**Packaging**

Cardboard box with mixing tips in plastic trays. Cartridges list the expiration date on the moisture-resistant label, but not the working and the setting times.

**Directions**

Plain paper foldout in 12 languages. Working and setting times are listed in the middle of the instructions.
Jet Bite
Coltene/Whaledent

**Cartridges**
Jet Bite/Jet Bite Fast
**Cost:** $39.75 ($0.40/ml)

**Includes:**
- 2 cartridges (50ml ea)
- 20 cartridges/$363.39 ($0.36/ml)
- 12 mixing tips (6 per cartridge)
- 12 spreader tips (6 per cartridge)

**microSystem**
Jet Bite/Jet Bite Fast
**Cost:** $39.75 ($0.40/ml)

**Includes:**
- 4 cartridges (25ml ea)
- 20 microMixing tips (5 per cartridge)
- 20 spreader tips (5 per cartridge)

**Dispenser (regular or micro)**
Cost: $127.70
Shelf Life: 2 years
MSDS: Not included

**Color**
Regular: Yellow.
Fast: Light peach.

**Adequate Working Time for Full Arch**
Regular: Yes.
Fast: Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th>Fast</th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>1 minute</td>
<td>53.2</td>
</tr>
<tr>
<td><strong>RRL</strong></td>
<td>1.25 minutes</td>
<td>75.9</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>77.8</td>
</tr>
<tr>
<td>Regular</td>
<td>Time</td>
<td>Hardness (Shore A)</td>
</tr>
<tr>
<td>Manufacturer/<strong>RRL</strong></td>
<td>1.25 minutes</td>
<td>76.7</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>81.4</td>
</tr>
</tbody>
</table>

**Raves & Rants**
+ Spreader tips work well
+ Two different delivery systems
- No difference between regular and fast set
- Relatively slow setting

**Taste**
Neutral.

**Packaging**
The regular system comes in 50ml non-clogging cartridges, with the expiration date printed on the moisture-resistant label. The microSystem version features 25ml single-cylinder, non-clogging cartridges. These require a special metal gun. The spreader tips mount on the end of the round mixing tip and convert the extruded material from a rope configuration to a more convenient, occlusal-table-covering ribbon. Both labels are color-coded to the set time and have the working and mouth removal time.

**Directions**
Plain paper in annoying foldout design in 11 languages. Working and set times well detailed. Written and graphical instructions are not consistent—it is difficult to decipher which is correct.
Adequate Working Time for Full Arch
Yes, but lower viscosity makes this difficult to dispense. In addition, its hardness could cause it to lock into undercuts. Taking two quadrants is more advisable.

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Knoop)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>RRL</td>
<td>3 minutes unreadable—too soft for testing</td>
</tr>
<tr>
<td></td>
<td>2 minutes unreadable—too soft for testing</td>
</tr>
<tr>
<td></td>
<td>24 hours 20.2</td>
</tr>
</tbody>
</table>

**RAVES & RANTS**

- Hardest of all
- No rebound when mounting models
- Relatively slow set
- Can lock into undercuts

**Packaging**
Cardboard box with tips in Ziploc bag. The cartridges have the expiration date and a warning to block out undercuts on the moisture-resistant label, but no working or setting times.

**Directions**
Plain paper fold-out with basic instructions. Also comes with an excellent booklet containing color clinical photos showing step-by-step directions for different bite registrations techniques. Particularly useful is the procedure showing using an anterior jig for taking a record in centric relation. There is also a warning about blocking out undercuts. On the other hand, all the photos show covering at least 3-4 teeth, when a hard material like this could really be used on just the preparation itself.
Bite Registration Materials

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>1.25 minutes</td>
</tr>
<tr>
<td>RRL</td>
<td>1 minute</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
</tr>
</tbody>
</table>

Taste
Neutral.

Packaging
Cardboard box with mixing tips in Ziploc bags. Non-clogging cartridges have the expiration date on the moisture-resistant labels, but no working or setting times.

Directions
Small, 40-page, saddle-stitched booklet with two-page instructions each of 13 languages.

---

Vanilla
Discus
www.discusdental.com

4f (3.9)

Cost: $29.00 ($0.30/ml)
Includes:
- 2 cartridges (48ml ea)
- 12 mixing tips (6 per cartridge)
Shelf life: 3 years
MSDS: Not included

RAVES & RANTS

One of the hardest @ 24 hours
Pleasant taste
Expiration date dissolved by disinfection
Somewhat more difficult to read compared to darker colors

Directions
Printed on outside of boxes as well as paper insert listing information for various renditions of Discus impression and bite registration materials. But specific information for this product is hard to locate on these types of general product line instructions. The copy outside the box states that it can be used as a matrix material, but no instruction is given on this utility. The set time is also indicated as total time “from mix to final set”, but you don’t really know if this means from the beginning of mixing or after mixing.
Correct VPS/Correct Plus Bite

| Color                  | Correct Plus/Super Fast | Purple. |
| Correct VPS/Regular    | Purple.                 |

**Adequate Working Time for Full Arch**
- Correct Plus/Super Fast: Yes.
- Correct VPS/Regular: Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th></th>
<th>Correct Plus/Super Fast</th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td>45 seconds</td>
<td>71.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>81.9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Correct VPS/Regular</th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>2.5 minutes</td>
<td>70.3</td>
<td></td>
</tr>
<tr>
<td>RRL</td>
<td>2.0 minutes</td>
<td>59.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>72.4</td>
<td></td>
</tr>
</tbody>
</table>

**Cost:** $37.50 ($0.19/ml)
**Includes:**
- 4 cartridges (50ml ea)
- 15 mixing tips (3.75 per cartridge)

**Shelf Life:** 2 years
**MSDS:** Included

---

Milk Chocolate

| Color                  | Brown.                  |

**RAVES & RANTS**
- Fast and regular set
- The low price leader
- Confusing directions
- No set times on cartridges

**Adequate Working Time for Full Arch**
Yes.

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td>1.5 minutes</td>
<td>67.8</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>84.4</td>
</tr>
</tbody>
</table>

**Cost:** $29.00 ($0.30/ml)
**Includes:**
- 2 cartridges (48ml ea)
- 10 mixing tips (5 per cartridge)

**Shelf Life:** 3 years
**MSDS:** Not included
**Bite Registration Materials**

**Taste**
Pleasant: chocolate.

**Packaging**
Cardboard box with cardboard insert in the middle of the inside of the box, separating the mixing tips from the cartridges. Non-clogging cartridge labels have the setting time, but the expiration date is on a separate sticker that is easily rubbed off in the disinfection process.

---

**5c Twinz VPS Bite**

**Bisco**

**NEW**

- **Cost:** $28.00 ($0.29/ml)
- **Includes:**
  - 2 cartridges (48ml ea)
  - 10 mixing tips (5 per cartridge)
  - 10 spreader tips (5 per cartridge)
- **Shelf life:** 2 years
- **MSDS:** Included

---

**RAVES & RANTS**

- Unique color
- Nice spreader tips
- Confusing directions
- Runner than others

---

**Color**
Copper.

**Adequate Working Time for Full Arch**
Yes.

**Directions**
Printed on outside of boxes as well as paper insert listing information for various renditions of Discus impression and bite registration materials. But specific information for this product is hard to locate on these types of general product line instructions. The copy outside the box states that it can be used as a matrix material, but no instruction is given on this utility. The set time is also indicated as total time “from mix to final set”, but you don’t really know if this means from the beginning of mixing or after mixing.

---

**Mouth Removal Time (from start of mix)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td>1.0 minute</td>
</tr>
<tr>
<td></td>
<td>57.1</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td>71.2</td>
</tr>
</tbody>
</table>

**Taste**
Neutral, although one evaluator reported it was unpleasant.

**Packaging**
Cardboard box with tips in Ziploc bags. Non-clogging, moisture-resistant cartridge labels have the working and setting times, as well as the expiration date.

**Directions**
Plain paper booklet combined with information on the impression material of the same name. It states to have patient close into the material for “1-3 minutes”, but the set time is supposed to be one minute. If that is the case, why have the patient continue to bite into it for another two minutes?
Genie Bite
Sultan Chemists

Cost: $25.00 ($0.67/ml)
Includes:
• 2 cartridges (50ml ea)
• 6 mixing tips (3 per cartridge)

Shelf life: 2 years
MSDS: Included

RAVES & RANTS
+ Pleasant taste and smell
+ Inexpensive
- Tends to be brittle and fractures when trimmed
- Streaking on dispensing

Color
Super Fast  Light blue.
Fast  Light blue.

Adequate Working Time for Full Arch
Super Fast  Yes.
Fast  Yes.

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer/RRL</td>
<td>60 seconds</td>
<td>56.2</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>83.2</td>
</tr>
<tr>
<td>Fast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer/RRL</td>
<td>90 seconds</td>
<td>55.1</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>81.3</td>
</tr>
</tbody>
</table>

Taste
Pleasant: Mint.

Packaging
Cardboard boxes with plastic trays securing the contents. The only difference between the two versions is the purple-color section on the front of the box for the Super Fast while the Fast Set version has a blue-gray section. The direct, moisture-resistant printing on the cartridges has the expiration date and the setting time, but it is not color-coded. The expiration date is also on the bottom of box.

Directions
Small sheet of plain paper. Very basic.

Regisil Rigid
Dentsply/Caulk

Intro Kit: $134.60 ($0.67/ml)
Includes:
• 4 cartridges (50ml ea)
• 12 mixing tips (3 per cartridge)
• 1 cartridge dispenser

Refill: $95.91 ($0.45/ml)
Includes:
• 4 cartridges (50ml ea)
• 12 mixing tips

Shelf Life: 2 years
MSDS: Included

RAVES & RANTS
+ 24-hour hardness good
+ Good color
- Tied for most expensive
- Fast set an illusion?

Color
Light Purple.

Adequate Working Time for Full Arch
Yes.

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>1 minute</td>
<td>68.5</td>
</tr>
<tr>
<td>RRL</td>
<td>1.25 minutes</td>
<td>75.9</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
<td>86.9</td>
</tr>
</tbody>
</table>

Taste
Neutral.
Bite Registration Materials

Packaging
Cardboard box with removable white tray securing the contents. The cartridges have the expiration date, however, the part of the label that has the expiration date and lot number is not as moisture-resistant as the rest of the label that features the product and company name. The label has the setting time, but not the working time.

Adequate Working Time for Full Arch
Yes.

Mouth Removal Time (from start of mix)

<table>
<thead>
<tr>
<th>Time</th>
<th>Hardness (Shore A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>1 minute</td>
</tr>
<tr>
<td>RRL</td>
<td>50 seconds</td>
</tr>
<tr>
<td></td>
<td>24 hours</td>
</tr>
</tbody>
</table>

Directions
Plain paper in annoying foldout design in 10 languages. Working and setting times are found under “Technical Data.”

Taste
Neutral.

Packaging
Cardboard box with a cartoon character on the outside. The cartridges have the expiration date on the moisture-resistant labels. There are also no working or setting times.

Directions
Plain paper in annoying foldout design. Two sets of instructions (12 languages in one and four in the other) are tacked together with a sticky substance to accommodate all the languages.
Futar Occlusion/Futar D has three versions that give you choices in firmness, set times, and “fashion” colors. It would be difficult to not find one to suit your needs. However, the names are confusing and D Fast has a gritty feeling intraorally.

Affinity Quick Bite, another companion product to the impression material of the same name, has a cool color, sets very fast, and scored close to the top in our 24-hour hardness test, but it should probably not be used for full arches.

Exabite II NDS has a unique color and slightly minty taste, and seems thicker than most when dispensing. It can be used for full arches and sets relatively fast. However, its 24-hour hardness is not as high as most products in this category.

MegaBite has the distinction of being the hardest vinyl in this category and achieved this hardness more quickly than any other product. Being very hard, it is especially useful when you have prepared the distal-most tooth in the arch. It trims well — doesn’t seem to crumble when trimmed thin. But its hardness can also cause it to break when removing it from undercuts. In addition, its ultrafast set probably doesn’t allow enough time for full arch bite registrations.

Registrado X-tra has the fastest set time (tied with Blu-Mousse), good medium stiffness, and convenient spreader tips, but the supply of the latter in the kit is too stingy and the taste needs improvement. It also tends to be brittle and seems to break fairly easily when removing from undercuts. In addition, one evaluator thought it was too runny.

Star VPS Heavy Stiff Bite has a fast set, good stiffness, and a reasonable price, but not enough mixing tips are in the kit for the four cartridges.

Stone Bite has the highest hardness at 24 hours (although hardness at MRT is relatively low), reasonably quick set, convenient spreader tips, and the wildest color, but its flavor won’t win any awards, doesn’t stack as well as others, and, due to its hardness, tends to be brittle when trimming.

Blu-Mousse, the original “mousse-like” material, is tied for the fastest set with the Super Fast version, but gives you the option of the Classic version if you want less speed. However, the Classic version can be displaced by a patient’s tongue before occluding, probably due to its slower set. Both versions can be used for full arches.

Imprint Bite extrudes easily, especially with its spreader tip, which is smaller (less waste) and has a better angle than others. It flows well, stacks without slumping, and trims cleanly. However, we found the manufacturer’s recommended mouth removal time to be a bit optimistic — it sets relatively slowly. In addition, its 24-hour hardness was the second lowest in this group, meaning it was considered somewhat too flexible. One evaluator reported several bite registrations that split mesiodistally across areas where the tooth-to-tooth contact caused the center of the bite to be quite thin. It also tied for the most expensive.

Jet Bite, with its microSystem delivery, gives you, perhaps, a more professional image than when using the ubiquitous “caulking” guns. Its spreader tip also allows you to more evenly apply a thin ribbon of material compared to more conventional dispensing, which is still available, but required relatively more force to dispense. Both versions should work for full arches and it has a neutral taste, but its set time is not quite as fast as most products in this category, even the “fast” version. And its 24-hour hardness is not as high as most products in this category.

Are you frustrated with flexible or even semi-rigid bite registrations that allow imprecise articulation of models? Then LuxaBite could be your ticket to tranquility. Think of a fast-setting, blue version of Luxatemp and you have LuxaBite, the first and still the only bite registration material based on the same bis-acryl composite chemistry we have come to appreciate for provisionals. You syringe the material over your preparations just as you would any other bite registration product. After about one minute elapses, the patient opens and closes to prevent the material from locking into undercuts. Then, after an additional 45 seconds—one minute, the bite is removed with either finger pressure or hemostat. What results is a hard bite that will not distort and should give you an absolutely stable articulation, which should mean less occlusal adjustments when seating restorations.

Whether this goal of minimizing occlusal adjustments is of major importance to all restorative dentists, this product does have some initially recognized shortcomings. In the first case, its hard set could pose some problems of locking into undercuts, even if you follow
the directions and have the patient open and close early in the curing cycle. This could be particularly critical with periodontally involved teeth. Second, its exothermic setting temperature can be perceived as uncomfortable by some patients. Third, it has a bitter taste. Fourth, if the tooth you prepared has a composite core or if any teeth in the area have newly completed resin restorations, it is prudent to lubricate them first to prevent them from adhering. Fifth, 63% of the evaluators thought the viscosity was just right, while 37% thought it was too runny. And, finally, trimming must be done with a rotary instrument, which is more labor-intensive than using the typical scalpel blade to trim an elastic material.

Our evaluation found that, if all bubbles are carefully removed from the models, the bite will fit very nicely and the models will exhibit no compression, sponginess, or rocking when mounting. Unlike an elastomeric material, this material does not tear, but it is brittle and can break into pieces if not handled judiciously. On one patient, the bite was dropped onto a tabletop, causing it to break into three pieces. The broken pieces, however, can be resembled.

Notwithstanding these disadvantages, the blue color contrasts very well with most diestones. Hardness is also appreciated with implants. If you remember to block out undercuts and don’t mind learning to use a hard bite material again (or for the first time), LuxaBite will definitely help create the ultimate nirvana of seating a restoration and having the patient say, after occluding, “That feels great”!

Memoreg 2 is a middle-of-the-road product when it comes to mouth removal time and price, although it was close to the top in 24-hour hardness. If you like pink, this is your product.

Vanilla has a pleasant odor and taste, sets very fast, becomes very hard at 24 hours, and can be used for full arches. However, it required relatively more force to dispense and felt thicker to bite through by our testers.

Correct Bite has two set times, with the fast set being very fast, medium hardness, and the lowest price of all, but don’t try to find out the set time in the directions—they are confusing.

Milk Chocolate has reasonable hardness, a unique color, and aroma to please the patient and lab tech, but it has a relatively slow set.

Twinz VPS Bite has convenient spreader tips, reasonable price, and an unusual color, but its 24-hour hardness is the lowest in this group and it tends to be too runny.

Genie Bite has two different set times, even though these times don’t match their names (Super Fast is more like just plain fast and Fast is more like regular), a pleasant taste and smell, and the second lowest price, but it can be streaking when dispensing and fairly brittle when trimmed.

Regisil Rigid has a unique color and can be used for full arches. But it doesn’t set quite as fast as some others in this category (regardless of what its new label states) and is tied as the most expensive.

Take 1 Bite, the companion product to the impression material of the same name, was considered to have the “right” viscosity by 90% of the evaluators. It required, however, relatively more force to dispense and felt thicker to bite through by our testers. Nevertheless, it can be used for full arches and sets very fast. One evaluator felt it was too brittle when trimming, while others found it easy to trim without breaking or tearing. But alas, the retro lunchbox, which made buying the kit worth it even if you didn’t like the material, has been retired and you must buy it in bulk—there are no small kits.

### OTHER PRODUCTS IN THIS CATEGORY

<table>
<thead>
<tr>
<th>Access Blue</th>
<th>O-Bite</th>
<th>Transbite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrix</td>
<td>DMG/Zenith</td>
<td>SciCan</td>
</tr>
<tr>
<td>Bite Buddy</td>
<td>Occlufast</td>
<td>Virtual Bite</td>
</tr>
<tr>
<td>All DentalProdx</td>
<td>Gingipak</td>
<td>Ivoclar Vivadent</td>
</tr>
<tr>
<td>Capture Hard Bite</td>
<td>Ramitec</td>
<td></td>
</tr>
<tr>
<td>Glidewell</td>
<td>3M ESPE</td>
<td></td>
</tr>
<tr>
<td>Exacta VPS Bite</td>
<td>TAK Bite Clips</td>
<td></td>
</tr>
<tr>
<td>Exacta</td>
<td>TAK Systems</td>
<td></td>
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</table>