NobelProcera®
restorations
in high-translucency
multilayered zirconia
Handling guide

nobelbiocare.com
Shades and material composition

NobelProcera offers high-translucency multilayered full-contour zirconia for crowns, bridges and implant bridges from two to five units.

Shade selection

<table>
<thead>
<tr>
<th>AWhite</th>
<th>ALight</th>
<th>ADark</th>
<th>BLight</th>
<th>CLight</th>
<th>DLight</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Orange / Yellow</td>
<td>Red / Orange</td>
<td>Yellow</td>
<td>Grey</td>
<td>Orange / Grey (Brown)</td>
</tr>
<tr>
<td>Bleach</td>
<td>A1, A2, A3</td>
<td>A3.5, A4</td>
<td>B1, B2, B3, B4</td>
<td>C1, C2, C3, C4</td>
<td>D2, D3, D4</td>
</tr>
</tbody>
</table>

Material

- Available in six shades: AWhite, ALight, ADark, BLight, CLight, DLight.
- High-translucency multilayered zirconia (HT ML).

<table>
<thead>
<tr>
<th>Base shades HT ML</th>
<th>Vita classical shade guide shade</th>
<th>Vita classical shade guide hue</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWhite</td>
<td>Bleach shades, A1</td>
<td>White</td>
</tr>
<tr>
<td>ALight</td>
<td>A1, A2, A3</td>
<td>Orange / Yellow</td>
</tr>
<tr>
<td>ADark</td>
<td>A3.5, A4</td>
<td>Red / Orange</td>
</tr>
<tr>
<td>BLight</td>
<td>B1, B2, B3, B4</td>
<td>Yellow</td>
</tr>
<tr>
<td>CLight</td>
<td>C1, C2, C3, C4</td>
<td>Grey</td>
</tr>
<tr>
<td>DLight</td>
<td>D2, D3, D4</td>
<td>Orange / Grey (Brown)</td>
</tr>
</tbody>
</table>

Material composition

<table>
<thead>
<tr>
<th>Material</th>
<th>Yttria-stabilized tetragonal zirconia polycrystal (Y-TZP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural strength (MPa)</td>
<td>1100</td>
</tr>
<tr>
<td>CTE (25–500 °C)</td>
<td>9.9 (±0.2) 10⁻⁶ /K</td>
</tr>
</tbody>
</table>

Source: Kuraray Noritake Dental
1. Zirconia adjustments and trimming
   - Check the fit of the NobelProcera Crown with partial cutback on the die and carefully adjust the margin area carefully to the die form.
   - Always use water cooling when trimming zirconia to prevent any cracks.
   - After finishing all adjustments make sure to check for cracks in the zirconia.

Important: When making adjustments be sure to maintain the minimum thickness of the entire restoration (0.4 mm for anterior and 0.7 mm for posterior regions).

2. Surface sandblasting
   - Carefully sandblast the zirconia surface using 50 µm alumina oxide sand with 0.2 MPa pressure to increase bonding of the veneering material.
   - Place the restoration back on the die to check the fit at the margin area using a microscope.

Tip: Protect the margins when sandblasting the surface to prevent any chipping.

3. Cleaning
   - Clean zirconia in the ultrasonic cleaner with acetone solution for five minutes.
   - After cleaning is completed do not touch with bare fingers to avoid surface contamination.
4. Opacious (opaque) dentin application (Option A)
- Mix opacious dentin with glaze or forming liquid, creating a certain viscosity to enable easier application.
- Evenly apply a thin layer opacious (opaque) dentin over the whole surface to increase the bonding strength of the veneering material with zirconia.

Important: Please refer to your veneering material manufacturer for more details.

Stain application (Option B)
- Instead of opacious (opaque) dentin, stains can be used and mixed with glaze and forming liquid to enhance the chroma of the zirconia prior to porcelain build up.

Important: Please follow the instructions and firing parameters recommended by the original porcelain manufacturer.

5. Veneering
- First build-up: Apply dentin and enamel veneering material on the cutback areas according to the desired shade and value.

Important: Please follow the instructions and firing parameters recommended by the original porcelain manufacturer. It is strongly recommended to always allow restorations to cool down slowly.
6. Veneering

- Second build-up: After first firing is completed and the restoration has been cooled slowly, make the necessary adjustments and proceed by applying a second porcelain build-up with enamel and translucent veneering material to complete the shape of the crown and achieve the desired tooth color.

**Important:** Please follow the instructions and firing parameters recommended by the original porcelain manufacturer. It is strongly recommended to always allow restorations to cool down slowly.

7. Adjustments and glaze firing

- Perform the necessary adjustments such as interproximal contacts and surface texture (morphology) before staining and glazing.
- Clean the crown after all adjustments are finalized.
- Apply stain and glaze where necessary prior to the glaze firing, being sure to cover all areas where no veneering material was applied.

**Important:** Please follow the instructions and firing parameters recommended by the original porcelain manufacturer. It is strongly recommended to always allow restorations to cool down slowly.

8. Polishing final crown

- Allow the crown to cool down after glaze firing is completed.
- Polish the whole crown with appropriate silicones or pumice, being sure you always polish the whole surface with the appropriate polishers to a high shine.

**Caution:** Do not overheat when polishing the crown as it could potentially cause cracks.

**Important:** Always inform your clinician that adjusted areas should be repolished to a high shine.
1. Zirconia adjustments and trimming

- Check the fit of the NobelProcera Crown on the die and adjust the margin area carefully to the die form.
- Always use water cooling when trimming zirconia to prevent any cracks.
- After finishing all adjustments be sure to check for cracks on the zirconia.

Important: When making adjustments make sure you maintain the minimum thickness of the entire restoration 0.4 mm for anterior and 0.7 mm for posterior regions.

2. Surface sandblasting

- Carefully sandblast the zirconia surface using 50 µm alumina oxide sand with 0.2 MPa pressure to increase bonding of the veneering material.
- Place the restoration back on the die to check the fit at the margin using a microscope.

Tip: Protect the margins when sandblasting the surface to prevent any chipping.

3. Cleaning

- Clean zirconia in the ultrasonic cleaner with acetone solution for five minutes.
- After cleaning is completed do not touch with bare fingers to avoid surface contamination.
4. Stain application

- Apply stain in the areas needed in the body and cervical areas to achieve the desired color or value and also to mimic translucency in the incisal area of the crown according to the selected shade.
- Ensure the mixture is of the right viscosity, if too much liquid is added there is a high likelihood that the stain will move after application.

**Important:** Please follow the instructions and firing parameters recommended by the original porcelain manufacturer.

5. Glazing

- Apply glaze evenly over the entire crown surface.
- Before placing the crown in the oven check one more time if the entire surface is covered with glaze material.

**Important:** Please follow the instructions and firing parameters recommended by the original porcelain manufacturer.

6. Polishing final crown

- Allow the crown to cool down after glaze firing is completed.
- Polish the whole crown with appropriate silicones or pumice, being sure to always polish the whole surface with the appropriate polishers to a high shine.

**Caution:** Do not overheat when polishing the crown as it could potentially cause cracks.

**Important:** Always inform your clinician that adjusted areas should be repolished to a high shine.