HOW TO TINT LENSES

1. SHAKE the BPI® red bottle for 30 seconds or
   The Pill®. Open The Pill® packaging with scissors.

2. EMPTY the tint into a clean tank. The Pill®: Drop The Pill® into a clean tank.

3. RINSE the remaining tint from bottle three times.

4. FILL the tanks to the working level.

5. RAISE the temperature to 60-70°C. (140-160°F) Let stabilize for a few minutes.

6. REMOVE ALL lids from ALL tanks

7. RAISE the temperature to 93-96°C (200-205°F). Let stabilize for a few minutes.

8. IMMERSE the lenses s-l-o-w-l-y and tint to the required density

9. STIR OFTEN! and when in doubt always check the temperature!

   1. 93-96°C (200-205°F) is the optimum tinting temperature. It allows the correct migration of the different size pigments that make up a typical BPI tint. The lens material will not accept the tints correctly unless this temperature is maintained.

   2. Some evaporation is typical and will not harm the tints. Just add more water and wait for the tint temperature to stabilize.

   3. Lower the temperature to 82°C (180°F) and cover the tanks when not actively tinting. (Raise the temperature and remove the lids when you resume tinting).

   4. Lens materials vary slightly which can affect results. (Manufacturer, composition, age, and or coatings). This can be minimized or eliminated by using correct temperatures. If variances occur, refer to the BPI® Color Correction Chart.

   5. Use a lab thermometer to verify the temperature. Tints will not boil if the temperature is measured correctly. Do not rely solely on the unit thermostat.

<table>
<thead>
<tr>
<th>COLOR</th>
<th>IS TOO:</th>
<th>CORRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROSE LENS</td>
<td>Blue</td>
<td>Dip in: RED</td>
</tr>
<tr>
<td>ROSE LENS</td>
<td>Red</td>
<td>Dip in: VIOLET</td>
</tr>
<tr>
<td>ROSE LENS</td>
<td>Brown</td>
<td>Remove the color</td>
</tr>
<tr>
<td>GREEN LENS</td>
<td>Yellow</td>
<td>Dip in: BLUE</td>
</tr>
<tr>
<td>GREEN LENS</td>
<td>Blue</td>
<td>Dip in: BROWN or YELLOW</td>
</tr>
<tr>
<td>GREEN LENS</td>
<td>Brown</td>
<td>Dip in: BLUE</td>
</tr>
<tr>
<td>GREEN LENS</td>
<td>Gray</td>
<td>Remove the color</td>
</tr>
<tr>
<td>GRAY (HIGH INDEX) LENS</td>
<td>Blue</td>
<td>Dipping in yellow should make the lens turquoise, Dip in: YELLOW, then RED</td>
</tr>
<tr>
<td>GRAY LENS</td>
<td>Green</td>
<td>Dip in: PINK</td>
</tr>
<tr>
<td>GRAY LENS</td>
<td>Purple</td>
<td>Dip in: YELLOW</td>
</tr>
<tr>
<td>GRAY LENS</td>
<td>Blue</td>
<td>Dip in: BROWN</td>
</tr>
<tr>
<td>GRAY LENS</td>
<td>Brown</td>
<td>Check tint temperature, it could be too low, Dip in: BLUE</td>
</tr>
<tr>
<td>GRAY LENS</td>
<td>Red</td>
<td>Dip in: BPI RED OUT™</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Red</td>
<td>Dip in: GRAY or BLUE</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Purple or Gray</td>
<td>Dip in: YELLOW</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Green</td>
<td>Dip in: RED, then BLUE</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Blue</td>
<td>Dip in: PINK, then YELLOW</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Orange</td>
<td>Dip in: BLUE</td>
</tr>
<tr>
<td>BROWN LENS</td>
<td>Yellow</td>
<td>Dip in: BLUE and RED/PINK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TO MAKE:</th>
<th>DIP IN:</th>
<th>THEN:</th>
<th>AND/OR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORANGE</td>
<td>Red</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>COSMETAN</td>
<td>Brown</td>
<td>Gray</td>
<td></td>
</tr>
<tr>
<td>TRUTONE</td>
<td>Gray</td>
<td>Green</td>
<td>Blue</td>
</tr>
<tr>
<td>G-31</td>
<td>Gray</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>PURPLE</td>
<td>Blue</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>AUTUMN BROWN</td>
<td>Gray</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>WINTER GRAY</td>
<td>Gray</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>VERMILLION</td>
<td>Red</td>
<td>Blue</td>
<td>Yellow</td>
</tr>
<tr>
<td>BURGUNDY</td>
<td>Orchid</td>
<td>Red</td>
<td></td>
</tr>
</tbody>
</table>

Heat transfer fluid. The correct heating medium for lens tinting instruments

Some manufacturers are claiming that using water as a heat transfer medium is the best way to heat tints in a tinting system. This is not so, and needs to be addressed so that proper lens coloring can be achieved, and proper health and safety can be maintained in the optical laboratory. To be effective, the heat transfer fluid temperature should be higher than the tint solution inside the tint tank. Tests conducted at BPI® have shown that as the tint solution nears boiling, the temperature differential between the heating fluid and the tint tank should be optimized at near 40°F. (To maintain a 205°F tint tank). This differential requires the heat transfer solution to be maintained at about 245°F. This temperature differential cannot be achieved using water open to atmospheric pressure as a heat transfer medium. The maximum temperature of water at boil is 212°F (100°C), thus making it difficult to achieve the proper tint tank temperature to assure proper color, fade resistance, and color stability.