Laboratory Handling Guidelines for Polyether Impressions

Control

Please inspect surface quality of the impressions arriving in the lab, (no mushy, melted surfaces). Surfaces should appear detailed and crisp.

Disinfection

All commercial water-based disinfectants indicated for dental impression materials can be used. Glutaraldehyde solutions are recommended for disinfection. Follow the manufacturer’s instructions for use, time, and level of disinfection required. After disinfection, rinse impression well with water and blow dry. The impression should be kept dry when sent to the laboratory. Temperatures exceeding 60°C/140°F will damage polyether impressions.

Pouring the Model —Casting

Surfactants (de-bubblizers) are not needed or recommended. Type 3 model stone, type 4 or 5 die stone can be used to pour polyether impressions. When pouring polyether impressions with epoxy, or any urethane resin based materials, a separator must be used.

Improved Removal

Heating the impression to about 40°C/104°F after the cast has set will help in the removal of the cast. Block out, or minimize undercuts if information is not needed. Isolating or blocking out the palatal area will help in removal of the model on a maxillary impression with a deep vault. When making a custom tray, make sure that you have 2-3mm material thickness per 1mm undercut. You may section or cut the custom tray if it is “locked-on” the model.
Implant Impressions

Choosing the right gingival mask material in combination with the right separating material is important:

a) 3M ESPE polyethers (Impregum™, Permadyne™ brands) can be used with common separators based on silicone, wax, or petrolatum (vaseline).

b) C-silicones (GI-MASK®, Coltene®) can be used without a separator.

c) Use caution with A-silicones (VPS), they can be used only with a separator that forms a sealed solid waxy layer (Sherasepal-U®, Shera®).

Separating materials can be applied with a brush, to insulate areas that are necessary.

Storage

Do not store polyether impressions in sealed plastic bags while still moist. Avoid direct sunlight exposure. Store in a dry place at room temperature 23°C/73°F. Polyether impressions can be poured anytime within 14 days after it has been taken if stored under recommended conditions.

Plating

Polyether impressions can be silver-plated, but cannot be copper-plated.