



## One-Step Mouthguard Fabrication Technique

*Safety glasses should be worn for all lab procedures as well as gloves when handling acrylics. Items featured in this technique are found on the last page.*



- 1 Liquid separator is applied with a brush to all model surfaces that will come in contact with the forming material.



- 2 The model is placed on the center of the platform with the heel facing the open chamber on the left.



- 3 A square 2mm thick piece of mouthguard material is tailored to make the first layer. Using No. 55 plate shears, cut the material diagonally, Trim the triangular ends to prevent the template from extending over the rim of the pellet cup. Cut a 1" to 1 ½ " triangular slot at the long edge of the template.



- 4 With the model on the platform, check the size of the cut template. The long edge should be aligned with the heel of the model and top and bottom cuts near the outer edge of the platform.



- 5 A 2mm or 3mm thick clear mouthguard material is clamped onto the pressure chamber. Identify the materials heating time or Biostar code and enter it into the machine.



6 Turn the heat gun on high and swing the heated lamp over the clamped material to start the heating cycle. With about 50 seconds remaining in the heating cycle, soften the template lying on the model with the heat gun. As the heating cycle nears its conclusion, material over the model should drape around the model. A decal or patient name can be placed on the colored material along the incisal region.



7 At the end of the timed heating cycle, remove the lamp from the material and swing the chamber over the model on the platform. Engage the locking handle to start the molding and cooling process. The formed material should be under pressure for 2 to 2 ½ minutes.



8 Evacuate the pressure from the chamber at the end of this cycle. Unlock the chamber and clamped material. Swing open the chamber and remove the formed material and model from the platform.



9 A rough cut-out of the mouthguard is done using a torch and a lab knife. Heat the knife to cut through the mouthguard material. Cut along the tissue anatomy at the model base and a few millimeters behind the last tooth in the arch. Also cut about 5mm below the gingival margins in the palate.



10 Trim and finish the mouthguard according to the parameters outlined in the Mouthguard Trimming and Finishing procedure.

**Items featured in technique:**

- 235-010 Astro Spec Safety Glasses (reg./blue)
- 235-062 N-Dex Non-latex Gloves (Med)
- 025-028 Assorted 2mm Square Colored Mouthguard Material
- 021-031 Clear 2mm Round Mouthguard Material
- 021-032 Clear 3mm Round Mouthguard Material
- 1100-1200watt Heat Gun
- 175-034 Separator
- 075-007 Separator Brush
- 220-023 No. 55 Plate Shears
- 080-006 Micro Torch
- 080-009 Gas Refill
- 170-005 Lab Knife



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