POUR TECHNIQUE INSTRUCTIONS

1. Wax denture to desired detail. The stone cast must be trimmed for easy withdrawal from the hydrocolloid mold. A 1/8" wide shelf must be trimmed by the peripheral roll. This shelf will support the stone cast in the hydrocolloid. Make sure all wax is off the occlusal surface of the teeth. Wax sprue leads must be added before denture is poured in hydrocolloid, as shown in diagrams; C, D and E on page #4. Wax sprue leads are normally only added on partials. The wax sprue lead is 6 gauge to 8 gauge round wax depending upon the size of the denture. The sprue lead should be sealed.
    a. *Wax left on the occlusal surface of teeth will cause incorrect seating of teeth when replacing them back in the hydrocolloid cavity.*
    b. *Undercuts on stone cast should be eliminated for easy withdrawal from hydrocolloid.*
2. Soak waxed stone cast in cold tap water for twenty (20) minutes to eliminate air.
    a. *Air left in stone cast will cause bubbles in hydrocolloid, creating bubbles in denture. Additional soaking time may be required depending upon the density or hardness of the stone cast.*
3. Place waxed stone cast in flask with posterior teeth always facing sprue holes, as illustrated on page #4, diagrams A thru F. Metal flasks should always be used. Place rubber plugs in sprue holes of the flask.
    a. *Metal flasks are a better conductor of cold and hot.*
4. Leave top plate of flask off and pour hydrocolloid to the side of the flask, pouring at 125° to 130° F. Do NOT pour directly on the wax up. Assemble top plate and clips. Place extension ring on top and fill with hydrocolloid.
    a. *Pouring hydrocolloid too hot may cause distortion of wax up.*
    b. *Pouring hydrocolloid directly on wax up may also cause distortion.*
    c. *Filling the extension ring is important as the additional hydrocolloid will compensate for the material that shrinks during the gelation progress.*
5. Bench set for five (5) minutes.
    a. *Bench setting is needed to help prevent shrinkage.*
6. Place flask in pan of circulating water submerged ¾ of its height for thirty (30) minutes. Depending on temperature, additional time may be required. Do not fully submerge flask in water.
    a. *Thirty (30) minutes may be sufficient but in warmer weather, five (5) to ten (10) minutes additional time may be required to aid in gelation.*
7. Remove wax cast from hydrocolloid. If cast is difficult to remove because of undercuts, remove hydrocolloid mold from flask, take a sharp knife and slit anterior along with both heels, then remove the model. Place hydrocolloid mold back in flask and place a damp towel over mold.
    a. *The purpose of placing a damp towel over the mold is to reduce the amount of shrinkage.*
8. Boil off wax and clean stone cast with detergent. Rinse in hot, clean water. Teeth are also boiled off; therefore care must be taken to assure that all wax and detergent are removed prior to their return to the mold. (Excellent retention can be obtained with plastic teeth by grinding the ridge laps.)
    a. *Detergent or wax on teeth may cause improper adhesion with acrylic.*
    b. *Residue on teeth may also cause spaces around necks of teeth.*
    c. *Detergent residue on stone cast may cause bleaching on tissue side.*

9. Soak stone cast for Five (5) minutes to eliminate air.
    a. *If there is any air present, small voids may occur on the tissue side.*
10. Apply a thin coat of foil substitute (Vita-Sep™, item no. 3505-09) to slightly heated model. Make sure it is completely dry before placing back in hydrocolloid mold.
    a. *If model is not dry, the foil substitute will mix with the acrylic, creating tissue surface pits.*
    b. *Bleaching may also occur if foil substitute is not completely dry.*
    c. *Always make sure foil substitute is of a thin viscosity.*
11. Diagrams for spruing are shown on page #4.
    a. *Take rubber plug out from holes, and proceed to take sprue borer and prepare sprue holes as shown in diagrams A thru F on page #4. Make sure there are no shavings of hydrocolloid left in mold.*
12. Make sure hydrocolloid mold is completely dry, and then position teeth in mold.
    a. *Excess moisture can cause surface pits on dentures.*
    b. *If teeth are not seated to occlusal surface of mold, excessive closed bite may occur. Always be sure damp towel is over mold when you are not working with it, to help prevent shrinkage of hydrocolloid tooth cavity.*
    c. *Partials with wire clasps and lugs should be secured to model with self curing acrylic so no movement takes place when case is being poured.*
13. Place stone cast back in hydrocolloid mold making sure it is seated.
14. Place a 5 X 5 plastic sheet over base of model to insure no leakage of acrylic when being poured.
15. Assemble Flask.
16. Always Measure. Measure fourteen (14) mL monomer to thirty (30) cc polymer. Pour no more than three (3) cases at a time. Always add powder to liquid, never the opposite. Monomer should always be refrigerated for extended working time.
    a. *Temperature is extremely important to reach the proper viscosity. If acrylic is not poured at the proper viscosity, problems may occur such as:*
        i. *Space around necks of teeth*
        ii. *Voids*
        iii. *Acrylic not flowing beneath framework.*
17. Pour cases by filling sprue holes as shown in diagrams on page #4. (note where arrows indicate)
18. Bench set for five (5) to ten (10) minutes depending upon thickness of case.
    a. *Bench setting will assist in giving acrylic a slow and proper cure.*
19. Place flask in pressure pot unit in cold tap water one quarter (1/4) of flasks height with sprue holes upright. Make sure seal on pressure unit is clean: pressure loss will occur if it is not, creating improper cure.
    a. *Porosity may occur if there is loss of pressure.*
    b. *Placing flask directly in hot water will also create porosity.*
20. Apply twenty (20) to thirty (30) pounds of pressure: using higher processing pressure improves density of denture.

21. Heat to 120°F (±2°) and cure for forty (40) minutes.
    a. *If case is not cured with proper curing time, cases will come out under-cured. Heavier cases should be cured an additional five (5) to ten (10) minutes.*
22. Cool flask and separate.

Relines and Duplications

Prepare reline or duplication as you normally would in heat curing process.
After denture is waxed to your desired detail, follow steps 1-22.

Special Note:

The hydrocolloid being used for dentures should be isolated from that being used for fabricating partials. Investment particles contaminating the hydrocolloid mold may also cause contamination of pour acrylic. Tamping investment has an acid in the liquids that are absorbed in the hydrocolloid. This can chemically attack the polymer.

Products available from Fricke for the Pour Technique:

Pour Flask
Oversized Pour Flask
All Replacement Parts for Pour Flask
Plastic Measuring Graduates
5x5 Sheets
Echo© - Hydrocolloid
Vita-Sep™ - Foil Substitute

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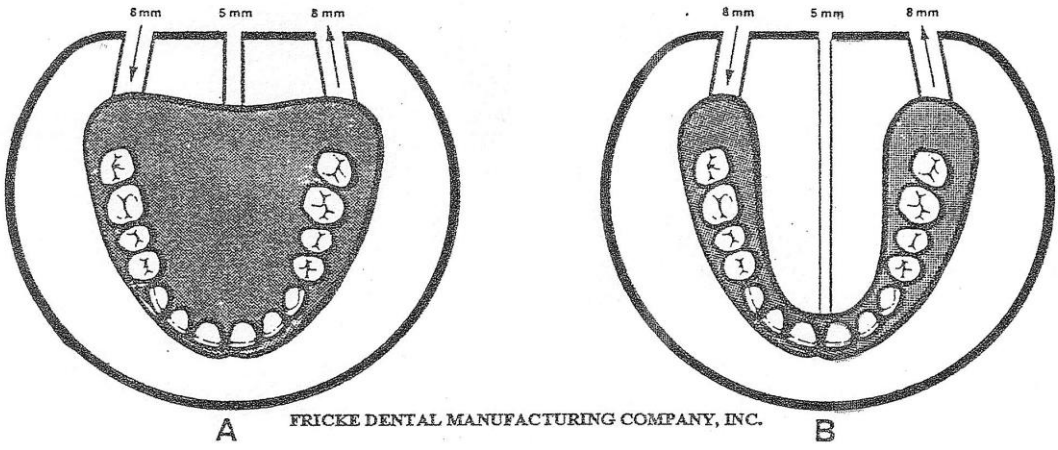

partials