



A Brand Division of American Tooth Industries

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Instruction Sheet

Justi Super Vipi STG Microflask

THE CURING OF ACRYLIC RESINS FOR DENTAL PROSTHESIS WITH THE JUSTI SUPER VIPI STG MICROFLASK SYSTEM USING MICROWAVE IRRADIATION

Group/Item No. 071-67-0004

Please read carefully before using the JUSTI SUPER VIPI STG MICROFLASK.

The **Justi Super Vipi STG Microflask** and the microwave irradiation technique for curing acrylic resins for the fabrication of dental prosthesis is the most advanced revolutionary system.

After the introduction of this system several modifications to the basic technique were made by the Research and Development Team of Justi Products, a Brand Division of American Tooth Industries. Following a preliminary research study of the technique compared to the conventional heat curing method, Dr. William Pagan, a prosthodontist with the Veterans Administration, developed the new standardized technique. A team of researchers from UCLA found that the curing of acrylic resins for dental prosthesis using microwave irradiation is more accurate and more dimensionally stable than conventional heat curing methods.



This newly established technique requires close adherence to specific power wattage and time factors when using a domestic microwave oven. Polymethyl methacrylate (PMM) denture base acrylic resins can be used with this technique. A more detailed explanation of the application of the **Justi Super Vipi STG Microflask** system with the microwave irradiation technique is presented and reviewed in this instruction booklet.

THE JUSTI SUPER VIPI STG MICROFLASK SYSTEM AND THE MICROWAVE IRRADIATION TECHNIQUE

MAJOR ATTRACTIONS:

1. More accurate and dimensionally stable prosthesis.
2. Uniform curing of the acrylic resin.
3. Rapid process.
4. Complete and total curing of the acrylic resin with no significant free monomer residual.
5. Clean removal method without damage to the flask.
6. Reduced energy costs.
7. Expedient service.



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JUSTI SUPER VIPI STG MICROFLASK

- The **Justi Super Vipi STG Microflask System** consisting of 4 stainless steel bolts, sleeves, and threads, guarantee the long life of the flask. The base section of the flask includes a "release" or de-flask disk that makes for the easy de-flask of material insuring a perfect denture and ease of operation. The upper section of the flask includes one large opening for the pouring of the plaster and three smaller openings to facilitate air evacuation as the flask is filled.
- The **Justi Super Vipi STG Microflask** includes an Allen Wrench key for both tightening and loosening the stainless steel bolts. The head of the stainless steel bolts includes a broad diameter fixed washer which increases the contact area between the bolt and the flask, resulting in the uniform closure and tightening of the flask without harming its surface.

IMPORTANT NOTE: Do Not Over Tighten Bolts.

- To open the flasks simply use the one end of the Allen Wrench key which is adapted for this purpose thus eliminating the use of any external striking force. The external surfaces of the flask are "ultra polished" which allows de-flasking without leaving residue inside the flask.

IMPORTANT NOTE: Tap Flask with Wooden Mallet Only.

MICROWAVE OVEN

The Welbilt MR 73T Microwave Oven generates 86 watts of power on the low setting and 500 watts of power on the high setting making this oven one of the best in the market for this technique however, you may use other brands of microwave ovens. When the **Justi Super Vipi STG Microflask** (a fiber reinforced plastic [FRP] flask) is placed on the turnable (revolving glass tray) the microwave transformer operates on a frequency of 2450 megahertz generating radio waves that create an electromagnetic field that moves the acrylic resin molecules at a speed of five billion times per second. This reaction produces numerous intermolecular collisions that generate internal, uniform heat that completely polymerizes the acrylic resin, and the residual monomer is significantly reduced producing a prosthesis that is more accurate and dimensionally stable.



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INSTRUCTIONS

1. Set-up:

- A. Prepare a waxed set-up denture pattern by the conventional method.

2. Investing:

- A. The **Justi Super Vipi STG Microflask** needs no separating agent. Investment will not adhere to its smooth surface.
- B. A 50% mixture of stone and plaster is recommended.
- C. Use the standard method of investing the waxed denture pattern.
- D. Place cover on top half of invested **Justi Super Vipi STG Microflask**, and secure with bolts.

IMPORTANT NOTE: Do Not Over Tighten Bolts.

3. Wax Elimination:

- A. Remove bolts from the **Justi Super Vipi STG Microflask**.
- B. To soften wax, place the **Justi Super Vipi STG Microflask** in the oven and irradiate for one minute at high setting (500 watts).
- C. Open flask, extract softened wax and proceed with conventional method for complete removal of wax. Use hot water and soap-type solvent to thoroughly clean the mold.
- D. While the **Justi Super Vipi STG Microflask** is still hot, apply a coat of liquid foil substitute and turn flask on end to drain and dry.

4. Packing Acrylic Resin:

- A. Mix Justi denture base material using a ratio of 3 parts powder and one part liquid to form a dough-like consistency.
- B. Pack denture with the standard method trial pack using a manual or pneumatic press to a maximum of 200 P.S.I.
- C. Install bolts after final packing while flask is still in press. Fasten bolts with finger pressure and tighten with wrench one quarter turn. (NOTE: Excessive torque may cause damage to the bolts).
- D. Allow the **Justi Super Vipi STG Microflask** to bench set for 20-30 minutes to equalize internal pressure before curing. Process one flask at a time in oven. Place flask vertically in the center of the turntable and close door.

5. Setting Controls and Curing:

- A. First stage- Set time to 13 minutes (13:00). Set power to WARM (86-90 watts).
- B. Second stage- Set time to 1 minute and 30 seconds (1:30). Set power to HIGH (500 watts).
- C. After completing the time and power settings, press the START button. The denture will cure automatically in 14 1/2 minutes (14:30) total time.

6. Cooling Flask:

- A. After curing is complete, remove the **Justi Super Vipi STG Microflask** from the oven and allow to bench cool no less than 30 minutes or until completely cold.

7. De-flasking:

- A. Remove bolts.
- B. With a wooden mallet, gently tap the flask on the outside edge (3 or 4 strokes should be ample).
- C. Continue removing denture from the investment by the conventional method.
- D. Finish and polish denture in the conventional standardized method.



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8. Cautions for Handling:

- A. The microwave oven should not exceed 500 watts output and include a warn level of 86 to 90 watts.
- B. Oven should be designated for curing denture resin ONLY. Do not use for cooking food.
- C. Keep oven clean at all times. Place paper or cotton towels under flask while curing.
- D. When applying pressure to the **Justi Super Vipi STG Microflask**, the top cover must always be up. Place the press so at least two bolts can be tightened under pressure. The third bolt can be tightened out of the press.
- E. Excessive investment and denture resin must be removed from each section of the flask frame in order to ensure proper closure.
- F. The **Justi Super Vipi STG Microflask** is constructed of a Fiber Reinforced Plastic (F.R.P.) with more than 2 1/2 times the strength for the designated process. Care should be taken not to drop it. Do not over tighten bolts and tap flask with wooden mallet only.
- G. Inscribe each section of the flask with the same number or code to avoid interchanging flask parts.

MICROFLASK GUARANTEE, EXCHANGE AND RETURN POLICY:

The Justi Super Vipi STG Microflask is guaranteed for 90 days.

MICROWAVE OVEN RECOMMENDATIONS:

- 1. The microwave oven must not exceed 500-watt limit when using the above instructions.
- 2. A variable power unit with a warm setting (85-90 watts).
- 3. A turnable revolving glass tray.
- 4. Use Justi denture base resin.
- 5. Standard methods of investing, wax removing and packing of the acrylic resin is recommended.
- 6. Curing one flask at a time is suggested.

IMPORTANT

THIS JUSTI SUPER VIPI STG MICROFLASK CAN BE USED WITH ANY MICROWAVE OVEN; HOWEVER, YOU NEED TO ADJUST THE TIME IF YOU INCREASE OR DECREASE THE WATTS POWER USED. THE ABOVE INSTRUCTIONS ARE ONLY MEANT TO GIVE A GUIDELINE WHEN A 500-WATT MICROWAVE OVEN IS USED.

ALTITUDE, WEATHER CONDITION, AND TEMPERATURE MAKE EACH LOCATION DIFFERENT. INDIVIDUAL END-USER SHOULD EXPERIMENT TO FIND THE BEST PERFORMANCE FOR THE MICROFLASK CONSIDERING OUR INSTRUCTIONS AS A STARTING POINT.