

## BPI Mini Tank 4™

For use only by qualified personnel in a laboratory environment.

Due to high operating temperature, access should be restricted.

BPI® does not warrant the use of non-BPI® products in this instrument.

Turn off the unit when you have finished tinting for the day. Never allow the tanks to run dry. Do not leave unattended.

## Specifications

The Mini-Tank 4™ System is one of a series of compact tinting units based on pint-sized dye tanks. The heating time required for reaching operating temperature is less than that for a unit with the same number of larger tanks. Extra tanks and racks to hold extra tanks are available. It has four one-pint tanks and like most BPI tinting units has provisions for mounting a Gradient Lensor.

The system requires 120 volt, 50/60 Hz and is circuit breaker protected at 20 amp. A 220 volt model is available. Components are UL and CSA recognized.

**NOTE:** Be sure always to use the ground wire on the power cord for safe operation; never bypass it.

## Unpacking


When unpacking your tint system, please check to ensure that no concealed damage occurred in transit.

If such is noted, save the shipping carton and immediately notify the shipping company's damage control inspector in your area so a claim may be processed.

Failure to do this may void any future claim and replacement. Also, call BPI Customer Service so arrangements for a replacement may be made. Please verify that you have received all the items listed above.

## Setting Up

Place your system on a LEVEL work surface convenient to an electrical receptacle. Make certain all switches are OFF.

TANKS	HEIGHT	WIDTH	LENGTH	WEIGHT	TRANSFER FLUID	CIRCUIT BREAKER	VOLTAGE	AMPERAGE
4 Mini Tanks (Pint capacity)	7.75 in.	9.75 in.	14 in.	20 lbs.	1-1/3 qts	20 amps. 250v. Circuit Breaker/Switch	110v	11 amps.
4 x 0.47 L	19.68 cm	24.77 cm	35.6 cm	9.07 kg	1.26 liters		220v	7 amps.
THE SET-UP KIT INCLUDES THE FOLLOWING PRODUCTS:						SYSTEM LAYOUT		
<ul style="list-style-type: none"> <li>• BPI Lens Prep II™</li> <li>• BPI Neutralizer II™</li> <li>• BPI Heat Transfer Fluid</li> <li>• BPI Lens Holder II™</li> <li>• BPI Molecular Catalytic™ tints (One each: gray, blue, yellow, brown, pink, &amp; green)</li> </ul>			<ul style="list-style-type: none"> <li>• Manual &amp; instructions</li> <li>• Tanks &amp; thermal tank lids</li> <li>• Adapter plate</li> <li>• Precision thermometer</li> <li>• Wall outlet (UL systems)</li> <li>• HTF siphon pump</li> </ul>			<p>FOUR MINI TANKS (PINT) (4 x 0.47 LITERS)</p> 		

Pour 1-1/3 quarts of heat transfer fluid over the heating elements into the base unit BEFORE turning ON any switches.

If heat is turned on before the heat transfer fluid is added, (With the dye tanks in place so that the elements are submerged), element failure may result due to excessive temperatures of the element.

Place stainless steel dye solution tanks into the main unit. Reserve one tank for Neutralizer II™. Fill the remaining tanks one-third full with water (distilled is preferred for grays and browns) and add one color of dye to each tank.

BPI dye are sold in concentrated solutions and are to be diluted to obtain the working solution. FOLLOW the instructions that come with the dye for proper mixing.

Add a little water to each dye bottle and shake well to remove the residual pigment in the bottle; add to the corresponding dye solution. Add water to the dye tanks to achieve the correct working level.

Pour Neutralizer II™ (full strength) into the reserved tank and Lens Prep II™ (diluted to 1 part to 32 parts water) into a separate container.

This last solution is used heated in larger dye machines, but works well at room temperature. Most users of this size unit prefer to have another color on line rather than heat the Lens Prep II™ working solution.

The front tanks of this system will typically be a few degrees hotter than the ones in back of the unit. Since Neutralizer II™ and certain colors (such as grays and browns) work better at higher temperatures we recommend keeping these tanks at the front of the system.

## Heating Up

The system has an ON/OFF switch, a temperature control dial, and an indicator lamp. The lamp above the temperature control dial indicates when power is being applied to the heating element.

Plug the unit into a properly grounded 120 volt electrical receptacle (The 220 volt model is shipped without a plug and requires a qualified technician for installation). Turn the switch ON. Set the temperature control dial to position 1. The lids may be in place at this temperature to speed the initial heat up.

When the thermostat lamp goes out, the unit has reached this low idle temperature. Remove the tank lids to prevent boil over before working towards higher temperatures.

Gradually increase temperature settings until the dye solution is heated to 200-210°F (190-200°F for gradients and light tints). It is recommended that a quality lab thermometer be used to monitor the dye temperature since it will DIFFER from the thermostat setting which is controlling the temperature of the heating element area.

If there is going to be a time lapse between batches, the unit may be idled at half scale on the thermostat setting and the lids placed on the dye tanks to minimize evaporation and



reduce the time it takes to attain operating temperature for the next batch. Since the pigment does not evaporate, you may simply add water from time to time to replace evaporative losses.

## Lens Tinting

1. Place one pair of lenses in lens holder.
2. Check the temperature of tints with the supplied thermometer before immersing lenses into dye bath. Immerse in Lens Prep II™ for 30 seconds.
3. Transfer to dye bath still wet. Take care to minimize the introduction of Lens Prep II™ in the dye bath as it may cause color shifts. Dye times vary from less than one minute to greater than 10 minutes.
4. Place back into the Lens Prep II™ for a few seconds.
5. Wash lenses using tap water and dry with a soft, lint-free cloth or Kaydry.
6. Check for density and color.

For more detailed instructions, refer to the BPI booklet "The Practical Guide to Lens Tinting".

## Neutralizer



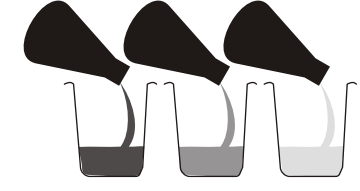

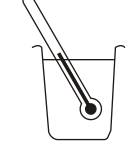
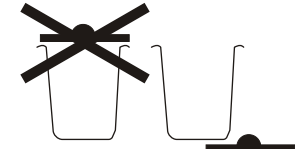

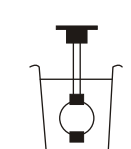
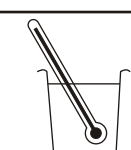
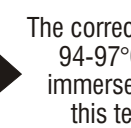
BPI Neutralizer II™ is for removing color from CR-39™ lenses ONLY. **Read precautions.**

1. Heat Neutralizer II™ in an approved dye unit. Do not exceed 210°F.
2. Dip lens to be neutralized into the heated solution until the desired amount of color has been removed.
3. Remove lens and rinse in cool water.
4. Lens may now be immersed in BPI Lens Prep II™ and re-tinted.

## Precautions

Use Neutralizer II™ in a well ventilated area or with a vent hood. NEVER USE ON OPEN FLAME OR ELECTRIC BURNERS!

If fluid contacts eyes, immediately wash with water. If irritation persists, contact physician. Harmful or fatal if swallowed. Product is combustible and may become flammable if directions and precautions are not followed.

	<b>SHAKE</b> BPI red bottle for 30 seconds		<b>EMPTY</b> tint into a clean tank
	<b>RINSE</b> remaining tint from bottle three times		<b>FILL</b> tanks to working level
	<b>RAISE</b> temperature to 60 - 70°C. (140 - 160°F) Let stabilize		<b>REMOVE</b> all lids from all tanks
	<b>RAISE</b> temperature to 93 - 96° C (200 - 205°F). Let stabilize*		<b>IMMERSE</b> lenses slowly and tint to required density
	<b>STIR TINTS</b> <b>FREQUENTLY</b> When in doubt always check the temperature!	<p>1. 93 - 96° C (200 - 205°F) is critical. This is the optimum temperature for tinting lenses and 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 level is maintained.</p> <p>2. Some evaporation is typical and will not harm the tints. Just add more water and wait for the tint temperature to stabilize.</p> <p>3. Lower temperature to 82° C (180°F) and cover tanks when not actively tinting. (Remember to raise temperature when you resume tinting).</p> <p>4. Lens materials vary slightly. (Manufacturer, composition, age, and or coatings). Tinting can be affected. This can be minimized or eliminated by using correct temperatures. If variances occur, refer to the BPI Color Correction Chart.</p> <p>*Use a lab thermometer to verify temperature. Water boils at 100°C (212°F). Tints will not boil if the temperature is verified correctly. Do not rely solely on the tint unit thermostat.</p>	
	<b>9</b>		