



Technical Guide

Post-Processing: Cleaning with PC1

Models can be cleaned using PC1 as an alternative to 99% isopropyl alcohol. Please follow all recommended safety protocol for materials and equipment required for this technical guide.

This Technical Guide is for E-Model series dental models.

Equipment

- Neoprene gloves
- Paper towels
- Pressurized air system (Canned air is not acceptable)
- PC1
- Timer (if one isn't included with the ultrasonic)
- Two processing containers: 3 1/2" d - 4" d
- Two storage containers for waste
- Ultrasonic cleaner
- Room temperature tap water

Introduction

PC1 is a non-carcinogenic, non-hazardous, non-flammable, eco-friendly replacement to alcohol. PC1 is chemically stable and is easy to use for cleaning models. By following a timed set of steps, models become clean and will be ready to be cured. Key features of this procedure include:

- This process can be completed in 15 - 20 minutes
- Can be completed on a tabletop
- Requires one person to complete

Post-processing is a fast and effective way to remove uncured material from the surfaces of printed models. Post-processing must be completed for each printed model. Models are not safe to handle without gloves until after they have been completely cured.

When to Clean with PC1

Complete step one before handling the models. Prepping helps to minimize accidental over exposure of the models to the baths.

- When printed models have been removed from the machine
- When the 99% isopropyl alcohol cleaning system is not appropriate

Process

Before beginning: Please wear neoprene gloves at all times throughout this procedure.

Prepare the Ultrasonic

1 – Place the ultrasonic onto a non-porous tabletop near an electrical outlet. Plug the machine in. Fill the ultrasonic with roughly 2 - 4 inches of water. Set the processing containers into the ultrasonic. Check that the water is well below the rim of the containers. Remove the processing containers. Label them accordingly; one for PC1 and the other for water.

Fill The containers 1 - 2 inches. The containers need to be filled enough to submerge models. PC1 needs to be added to the first container. Use room temperature tap water for the second processing container. Set the timer for five minutes.

Processing the Models

2 – After models have been removed from the printer, place them carefully into a transport tub or on paper towels. Bring them to the cleaning space immediately.

3 – Place one or more models into the PC1 container. Multiple models can be cleaned at the same time as long as they are all fully submerged.

Place the PC1 container into the ultrasonic. Start the ultrasonic on the lowest heat setting. Start the five minute timer.

4 – Once the timer reaches 0:00, remove the container. Remove the models. Dry models thoroughly using a pressurized air system.

Inspect the models. Examine each model for variations in the surface quality. Glossy sections will need to be focused on during the second cycle.

5 – Place models into the second (water) bath. During this step, additional models can be placed into the PC1 bath as well. If this is the case, add new models to the PC1 bath as well. Place both processing containers into the ultrasonic.

Set the timer and run the ultrasonic for five minutes. Remove the processing containers, then remove the models, keeping the PC1 and water cleaned models separated.

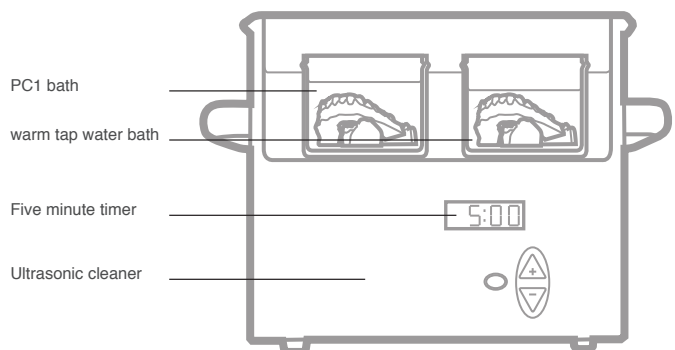
Blow each model dry.

If models are still glassy / slippery looking, repeat each bath for one minute.

Do not leave models to soak longer than necessary. Remove supports, if any exist, before curing models.

For large batches, use two ultrasonics; one for PC1 and the other for room temperature water.

Fig. 1 ULTRASONIC SETUP



Safety

Wipe the insides of the processing containers clean using paper towels after the procedure.

The processing containers are reusable.

Please see the material safety data sheet for more information about PC1 handling:

<https://envisiontec.com/wp-content/uploads/2018/10/2018-PC1-SDS.pdf>

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