

## To Refill Vascular Access Ultrasound Phantom

With normal use you may find a reduction in the amount of fluid in the vessels and/or that air has been introduced. This is normal and can be corrected in the following manner:

1. Prefill your syringe with **VATA Simulated Ultrasound Blood**. Use of any other simulated blood is not recommended as it will affect the image quality and void the warranty. Fill the syringe **slowly**, as this minimizes air bubbles from forming. Expel any air in the syringe. Leave 2 ml of the syringe volume unused. See fig. 1
2. Place a mark on a 20g needle  $\frac{1}{2}$ " (13mm) from the tip. See fig. 2
3. Place phantom in a vertical orientation with the side that has recessed dimples at the top. See fig. 3
4. Gently tap the convex side of the phantom to move any trapped air towards the top of the vessel for aspiration. See fig. 4
5. Insert the needle into the dimple of the vessel you wish to fill. See fig 5. The  $\frac{1}{2}$ " (13mm) mark should be just outside the flesh colored phantom material for proper placement. This will insure the needle tip is properly placed in the vessel to remove any trapped air.
6. Keeping the needle and syringe above the phantom, drawback on the plunger into the unused 2ml of the syringe, observing if any air is removed. See fig. 6



Figure 1

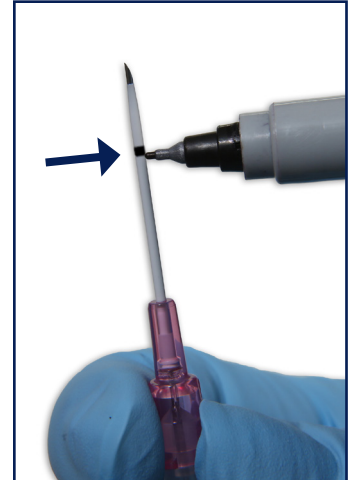


Figure 2

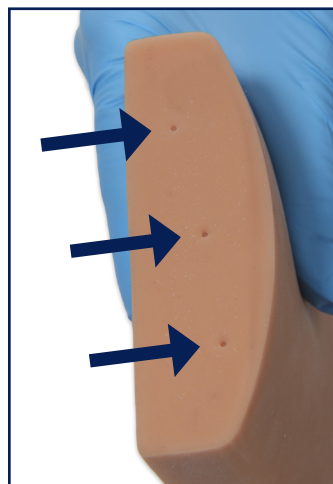


Figure 3



Figure 4



Figure 5



Figure 6

7. If air is removed, slowly refill the vessel with the same amount of simulated blood as the air removed. Repeat as needed until no more air is removed. See fig. 7

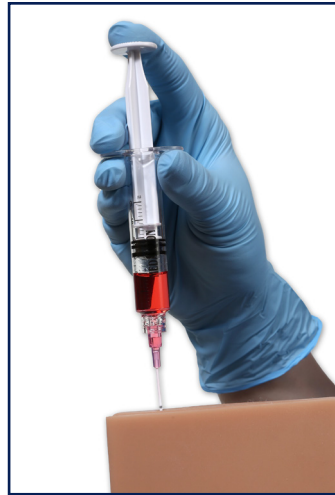


Figure 7

8. You may find it helpful to have a paper towel handy to absorb any fluid that exits the phantom from previously punctured sites, which can occur if the vessel has been over-pressurized in the refill process. If this occurs, keeping the needle in the phantom, remove the syringe. You may see a couple of drops simulated blood drip from the needle until the over-pressure in the vessel has been released. See fig. 8



Figure 8

9. Remove the needle. You have completed the refill process and the phantom is ready for use.

**Note: Some over-pressurization of a vessel can be intentionally done to enhance flashback. This amount can vary, based on the age and number of punctures on the phantom.**

## Helpful Hints

- **Do not expose to elevated temperatures for extended periods of time.**
- Simulated blood is stain resistant. For best results clean as soon as possible.
- Clean phantom with soap and warm water.
- If the surface of the phantom becomes tacky, sprinkle with cornstarch baby talc and wipe off any excess.
- Always store with cover on.
- Do not place the phantom in contact with items made of vinyl or PVC, as degradation of the phantom can occur.
- Placing items on the phantom for a prolonged period of time may cause a permanent deformation on the phantom's surface.
- To maximize the useful life of the phantom, use 20g and 22g needles.
- Failure to use **VATA** simulated ultrasound blood in model will affect image quality and void product warranty.