

# I.V. INJECTION ARM P50/1

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The I.V. Injection Arm P50/1 is an educational system developed to assist a certified instructor. It is not a substitute for a comprehensive understanding of the subject matter and not intended for clinical decision making.

Congratulations, you have acquired a 3B Scientific® quality product. The I.V. Injection Arm P50/1 is made of 3B SKINlike™ silicone.

**The injection arm can be used to train the following:**

- Intravenous injections
- Punctures of the peripheral veins [basilic v., cephalic v., median cubital v., hand (dorsal venous network)]
- Positioning of a butterfly catheter

## ➤ CONTENTS OF THE I.V. INJECTION ARM P50/1

The trainer consist of an adult arm with a simulated vein system covered with a removable skin. The arm and the infusion system is supported by a stand.

- 1 injection arm
- 1 infusion bottle with a tube locking clip and a Y-tube connector
- 1 stand
- 1 bottle of 3B Scientific® artificial blood concentrate (250ml)
- 1 plastic cup
- 1 disposable syringe
- 2 injection cannulas (recommended cannula size: 20 and 21 gauge)
- 2 tubing systems with 2 transparent tube connectors and 2 tube locking clips as replacement parts
- 1 container of talcum powder



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## > INSTRUCTION FOR USE

### Filling of the infusion bottle with the blood

1. Make sure that the locking clip of the ventilation tube of the infusion bottle is locked
2. Fill the infusion bottle up to the red line with the artificial blood concentrate
3. Then fill the infusion bottle up to the blue line with water
4. Close the bottle and shake gently to obtain a homogeneous solution.



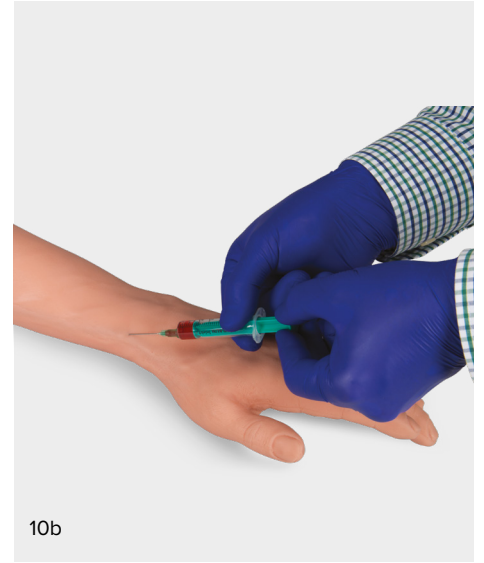
### Installation of the infusion system

1. Fasten the hanging hook at the middle of the stand
2. Hang the injection arm onto the hanging hook using the arm ring screw
3. Connect the shorter injection tube to the infusion bottle
4. Make sure that the locking clip of the longer tube is locked
5. Attach the infusion bottle upside down to the retaining clip by pushing the sealing cap of the bottle sideways into the grey retaining clip of the stand.
6. Insert the longer tube in the plastic cup and allow the blood to flow into the cup for a short time to remove any bubbles
7. After checking that all the connections are correctly placed and that the longer tube is in the plastic cup, open the locking clip on the ventilation tube of the infusion bottle and the locking clip of the longer tube
8. The system will then be filled up and blood will start to flow out of the longer tube in the plastic cup. Let the blood flow out until you see no more bubbles coming out from the longer tube



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9. Close the locking clip of the longer tube and connect it to one branch of the Y-connector on the infusion bottle
10. You can now start puncturing the peripheral veins



## After using of the Injection arm:

To remove the artificial blood after use please follow the following steps:

1. Make sure that the locking clip of the ventilation tube of the infusion bottle is closed
2. Make sure that the locking clip of the longer tube is closed
3. Disconnect the longer tube from the Y-connector
4. Remove the infusion bottle from the stand retaining clip and turn the bottle upright
5. Disconnect the shorter tube from the bottle connector by gently unscrewing the connector
6. Put the ends of the tubes in a container or bucket in order to remove the remaining blood in the tubing system

If you are not using the injection arm for a prolonged period of time, it is recommended to rinse the complete tubing system so that no dye residues can settle in the system.

Please fill water into the infusion bottle and repeat the all installation steps in order to clean the system.



## How to drain the tube system

To ensure optimal performance and prevent leakage after use, always allow all liquids to drain completely into the supplied cup, exactly as shown in the photo.

\*Hold the tube system in the correct position and let it continue draining until no more drops are released.



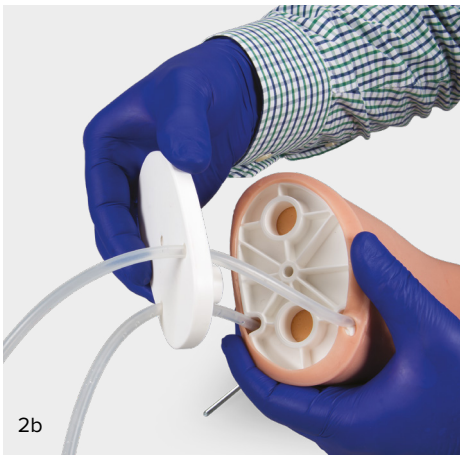
**CAUTION!** Failure to fully drain the system as described may lead to residual liquid buildup and cause leakage. This is one of the most common causes of post-use complaints and device malfunction. Please follow this step carefully after each use.

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## ➤ CHANGING THE SKIN AND THE TUBING SYSTEM

### How to change the tubing system

1. To change the tubing system you first need to remove the skin. Please remove first the transparent tube connector from the shorter tube and remove the locking clip from the longer tube
2. Unscrew the ring screw and open the two parts of arm sealing caps



3. Starting at the top of the arm, roll the skin off the arm core
4. Unfasten the Velcro strips and gently remove the tubing system from the arm core.

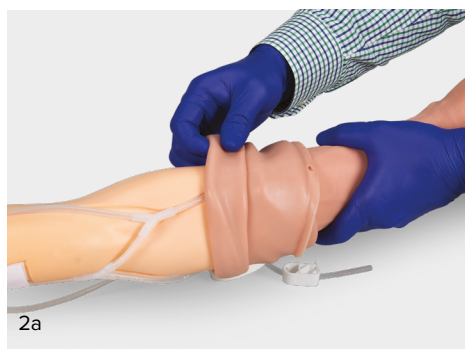


**NOTE:** Do not pull or stretch the tubing forcefully. Excessive tension can lead to misalignment or damage, causing the vein to sit improperly in the grooves.

5. Fit the new tubing system carefully and precisely into the provided grooves. Ensure the tubing follows the molded path and is seated evenly throughout.

\*If needed, apply additional tape to help secure the tubing in place and prevent shifting during use.

6. Refasten the Velcro strips securely to complete the installation.



### How to put back the skin

1. The new skin can be pulled over the hand and arm core by putting some talcum powder onto the skin and distributing the powder by moving the skin back-and-forth
2. Pull the skin over the hand core and arm core, put the tube back through the location hole and the cover plates. The rim of the skin should be closed between the two cover plates. Fasten the ring screw and replace the sealing caps onto the tubes
3. Please don't forget to plug back the transparent tube connector on the shorter tube and to reinstall the locking clip on the longer tube.

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## NOTE:

- The skin and the tubing system of the injection arm are subject to wear and tear caused by usage. We supply the skin and the tubing system as a replacement parts.
- As the injection arm is an anatomical model, several – non-puncturable – veins are portrayed in the skin in addition to the puncturable veins.
- The artificial blood may cause stains. But don't worry, stains caused by the 3B Scientific® artificial blood can be washed out at 40°C.
- Indwelling vein cannulas may damage the material of the skin and of the tubing system. Please use injection cannulas of the recommended size (20 or 21 gauge) only and change the skin or the tubing system when damages of the skin become visible.

## > PRODUCT NUMBERS FOR REPLACEMENT PARTS

Product Reference	Intern Reference	Description	Composition
1021419	(XP50/1-002)	Puncture accessories	1 Tubing System 1 Tube Connector 1 Tube Locking Clip 1 Disposable Syringe 2 Injection Cannulas 20 and 21 Gauge 1 Plastic Cup
1021422	(XP50/1-003)	Arm and hand core	1 Arm Core 1 Hand Core
1021423	(XP50/1-004)	Infusion bottle	1 Infusion Bottle
1021425	(XP50/1-005)	Stand	1 Stand
1021426	(XP50/1-006)	Replacement skin without core	13B SKINlike™ Silicone Arm Skin 1 Container of Talcum Powder
1021427	(XP50/1-007)	3 Tubing Systems	3 Tubing System 3 Tube Connector 3 Tube Locking Clip
1021251	(XP110)	Artificial Blood Concentrate	250 ml Bottle