⚠ Caution | Do not mark on the model with a pen or leave printed materials in contact with the model surface. Ink marks on the model are not removable.

MW9

Peripheral Venous Catheter Placement Simulator

Instruction Manual

Contents

Movie Site

English Site

https://youtu.be/FBcDaMuL3tw

KYOTO KAGAKU CO.,LTD

Introduction

Manufacturer ś note

This model has been developed for comprehensive training in the procedure of the peripheral venous route management with the intravenous cannula such as: confirmation of the puncture site, insertion and holding needle in place with film dressing.

● Features

- All training skills for the peripheral venous route management with IV cannula
- Two puncture sites, which are the median antebrachial vein and dosal vein of hand
- Practice for the extension of hand skin and the angiopressure management
- Durable puncture pad in with IV cannula

⚠ DOs and DON'Ts

DOs

- Handle the manikin and the components with care.
- Storage in a dark, cool space will help prevent the skin colours from fading.
- The manikin skin may be cleaned with a wet cloth, if neccessary, using mildly soapy water or diluted detergent.

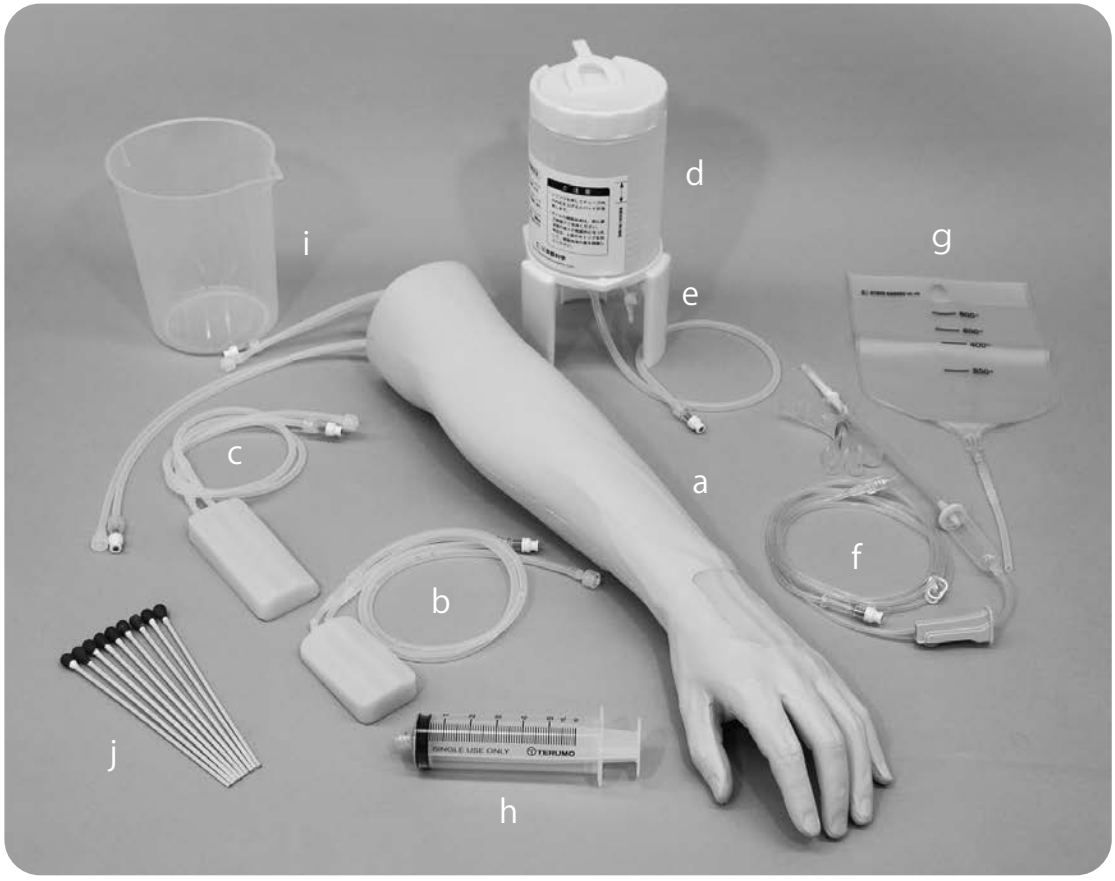
DON'Ts

- Do not let ink from pens, newspapers, this manual or other sources come in contact with the manikin, as they cannot be cleaned off the manikin skin.
- Never use organic solvent like paint thinner to clean the skin, as this will dameage the simulator.

Please read carefully before use

Set Includes

Before your first use, ensure that you have all components listed below.



〈 Simulator contents〉

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g.	Infusion Bag	1	
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i.	Plastic Beaker	1	
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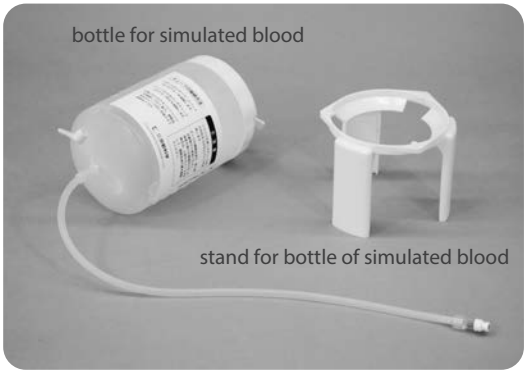
	Instruction manual		

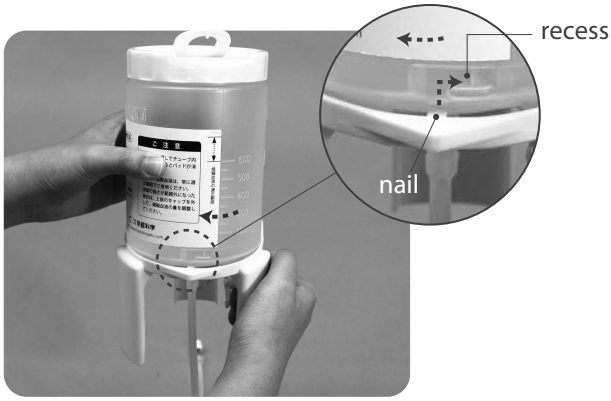
Preparation the simulated blood

1 Preparation the simulated blood

Prepare the simulated blood.

1. Set the bottle for simulated blood on the bottle stand. Align the three nails on the bottle stand with the three recesses on the bottom of the bottle. Engage the bottle and the stand by slightly turning the bottle clockwise.



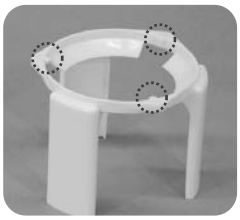


⚠ Caution

Ensure that all the three nails are inserted in the recesses on the bottle completely, then turn the bottle clockwise until you can hear a click sound.

three recesses

three nails



2. Pour 1000mL of water into the plastic beaker. Put the simulated blood (swab type) into the beaker and stir the water sufficiently to prepare the simulated blood.

⚠ Caution

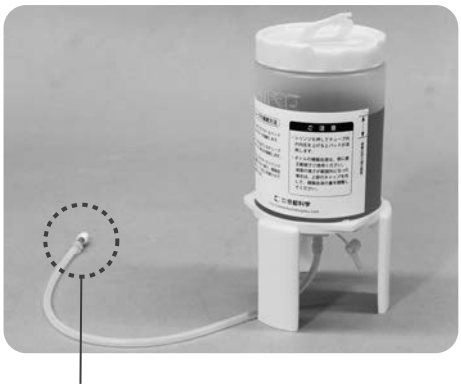
Take care not to drop simuleted blood on clothes as simuleted blood stains can be very difficult to remove.

Preparation the simulated blood
Connection of the tube

1 Preparation the simulated blood

3. Take the lid off the bottle for simulated blood and pour approx. 700mL of the simulated blood into the bottle. The level of the simuleted blood must be in the range indicated by the arrows(◄----►) on the bottle surface.
   Put aside the remaining simulated blood for replenishment during the training.

the range indicated by the arrows



⚠ Caution

Pour the mimic blood to a level within the range indicated by the sign of " ◄----►" on the bottle.
If the level of the simulated blood is under the indicated range, you cannot check blood return (flashback) because the pressure on the simulated blood decreases.
Always replenish simulated blood into the bottle when it decreases under the level during the training.

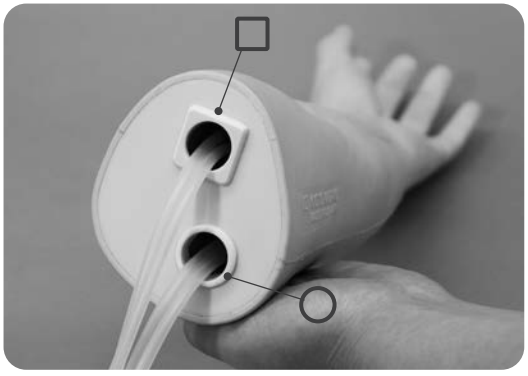
4. Close the lid of the bottle securely after pouring the simulated blood into it.
   Now the simulated blood has been prepared.

* The connector on the tip of the simulated blood bottle tube (SurePlug) is locked when it is not connected with the other connector. This will prevent the simulated blood from leaking from the tube.

2 Connection of the tube

1. Connect the tubes from the pad and from the bottle.

   Injection pads for dorsal vein of hand and median antebrachial vein are set on the arm model body when delivered. Two tubes are connected to each pad, therefore four tubes in total come out from the shoulder side of the arm model.

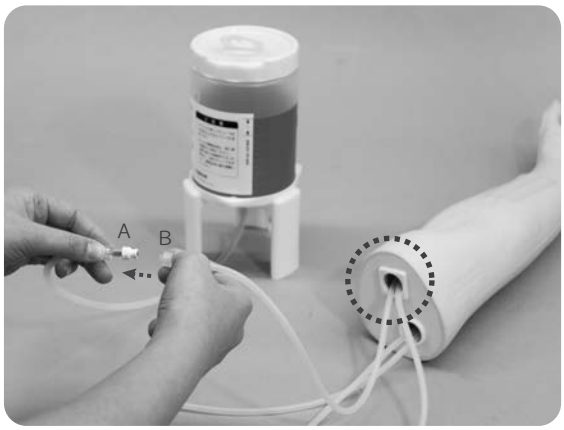


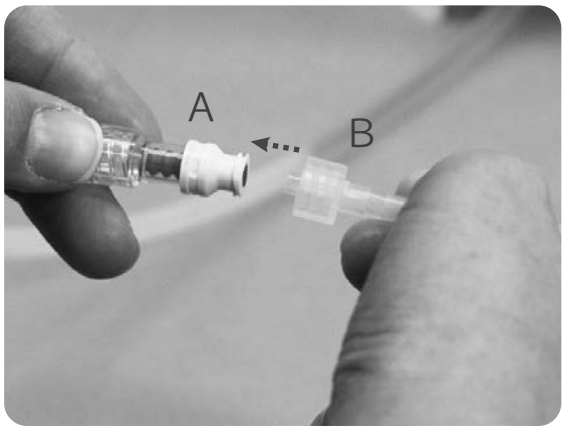
□ The tubes that come out through the hole indicated with a square are connected to **the median antebrachial vein injection pad.**

○ The tubes that come out through the hole indicated with a circle are connected to **the dorsal venous of hand injection pad.**

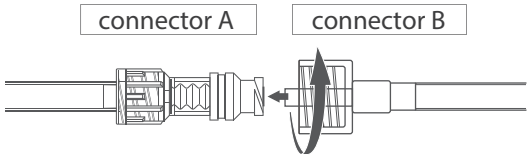
2 Connection of the tube

2. Connect the tube (connector A) from the bottle with the tube (connector B) from the injection pad. Connect the tube from the dorsal venous of hand injection pad (that comes out through the hole indicated with a square) with the tube from the bottle.





Connect the tube of connector A to the tube of connector B.

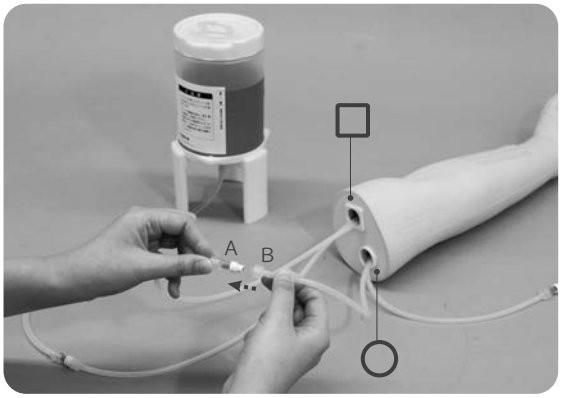


Engage the connector B by rotating it clockwise while pressing it to the connector A.

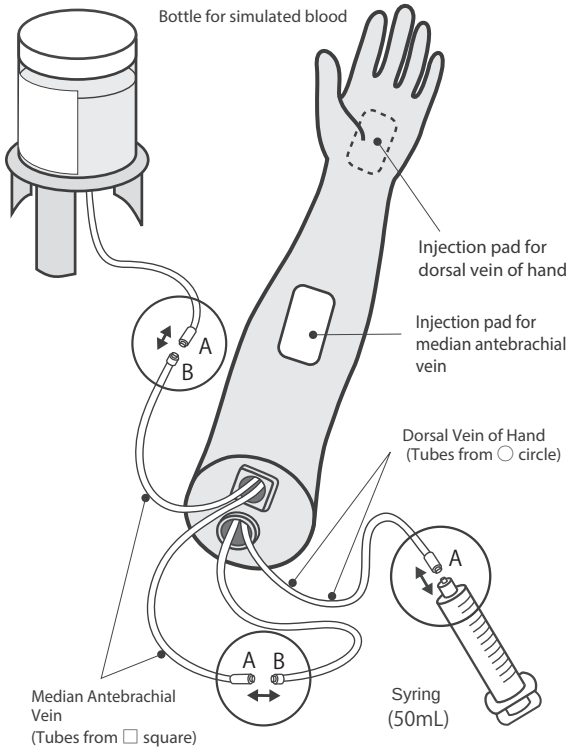
⚠ Caution

Ensure to rotate the connector until it stops to release the interlock. If the rotation is halfway, liquid would not flow through the tube.

3. Connect the tubes from each injection pads together. (Connector A and connector B)

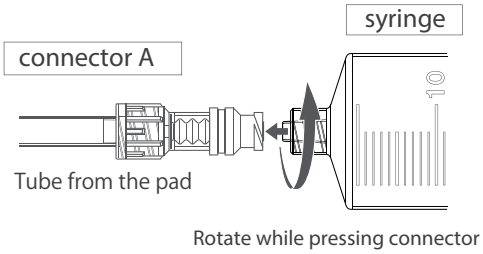


● Tube Connections



2 Connection of the tube

4. Connect a syringe (50mL) to the connector of the tube that comes from the median antebrachial vein injection pad. The tube comes out through a hole indicated with a circle.



3 Fill the simulated blood

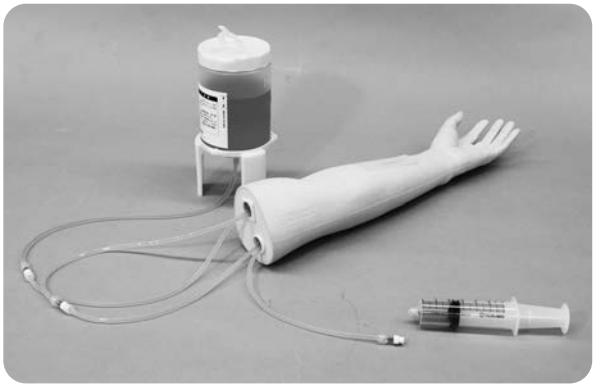
1. Draw the piston of the syringe slowly to fill the tubes and pads with the simulated blood

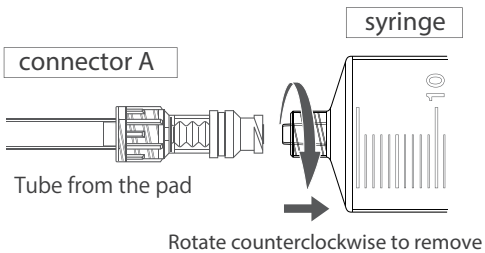
⚠ Caution

Draw the piston of the syringe slowly. The tube within the pad might be damaged if you draw the piston too quickly.

When the simulated blood does not flow into the tube, check if the connectors are securely fastened. Do not draw the piston forcibly.

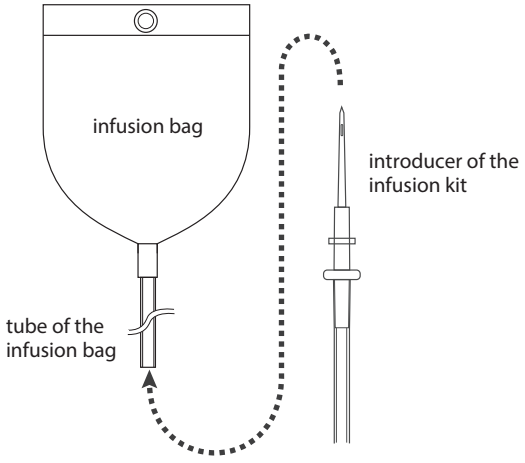
2. After the simulated blood reaches the syringe, remove the syringe from the tube. Now the simulator is ready for training session.



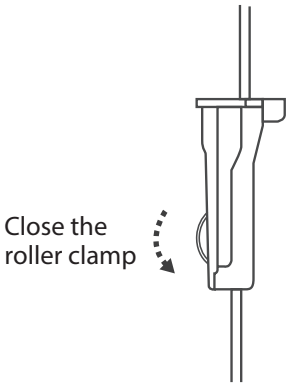


3 Preparation of the infujion kit

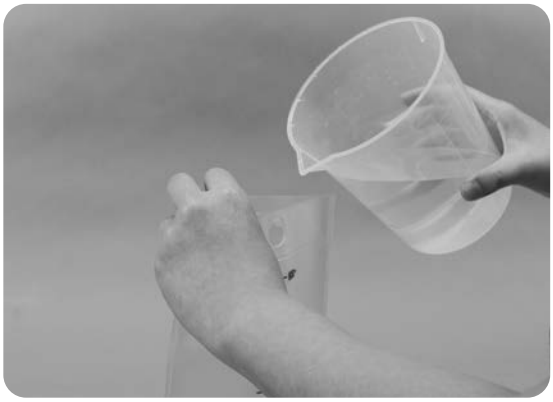
1. Connect the infusion kit to an infusion bag.



2. Close the roller clamp of the infusion kit to prevent the infusion fluid (water) from running.



3. Pour a certain amount of water into the infusion bag and then hang it on a drip stand.



⚠ Caution

Always use water for training. Fluid other than water can accelerate deterioration of the tubes within the pads and cause clogging in the tube.

Training session

1 Training for the peripheral venous cannulation

The training of peripheral venous cannulation with the simulator can be conducted on dorsal vein of hand and median antebrachial vein.

Training skills:

1. Tourniquet application
2. Confirmation of puncture site
3. Sterilization of puncture site
4. Puncture with IV cannula
5. Confirmation of flash back in puncture
6. Angiopressure management and decannulation
7. Setting of Infusion tube
8. Confirmation of natural instillation
9. Fixing of the puncture site
10. Injection of medical solution from injection sub port

1. Tourniquet application

2. Confirmation of puncture site
(It is possible to stretch the dorsum manus by bending the fingers of the simulator.)

3. Sterilization of puncture site

⚠ Caution

Always remove the tourniquet after the practice.
The imprint of the tourniquet might be left on the arm model if it is applied for a long time.

Do not apply too much pressure when you rub the surface during disinfection training.
If you use a colored antiseptic solution, the color might remain on the pad.

4. Puncture with IV cannula (It is possible to stretch the skin.)

⚠ Caution

Venous indwelling needle of 22G or thinner is recommended for training.
Using a thicker needle than the recommended size accelerates deterioration of the pad.

Training session

1 Training for the peripheral venous cannulation

5. Confirmation of flash back in puncture

When the needle is correctly inserted to the vein, blood return (flash back) can be verified.

6. Angiopressure management and decannulation

When the vein is pressed at the correct position, the blood return stops.

7. Setting of Infusion tube

8. Confirmation of natural instillation

⚠ Caution

Always use water training. Fluid other than water can accelerate the deterioration of the tubes within the pads and cause clogging in the tube.
Immediately wipe off the simulated blood that has dropped on the main body of the arm model to avoid staining the model.

Training session

1 Training for the peripheral venous cannulation

9. Fixing of the puncture site


dorsal vein of hand


median antebrachial vein

⚠ Caution

Do not store the arm model with the dressing material on it. If it is left for a long time on the surface, the surface of the puncture pad and/or the body of the model will absorb the adhesive. It is difficult to get rid of the stickiness. Furthermore, if something is written on a tape and the tape is left on the body of the arm model for a long time, the ink might transfer to the arm model.

10. Injection of medical solution from injection sub port

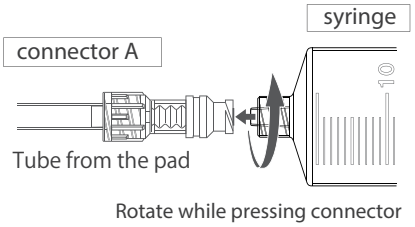
⚠ Caution

Always maintain the correct level of the simulated blood in the bottle within the designated range. When the simulated blood decreases and its level comes below the range indicated by ⟷ on the bottle, replenish it to restore the level to the appropriate range.
When water or the other solution flows into the tube with the simulated blood during natural dripping of the infusion solution or drug solution injection from the side injection port, connect the syringe (50mL) again to the connector of the tube, then draw the piston slowly to re-fill the tube with the simulated blood.

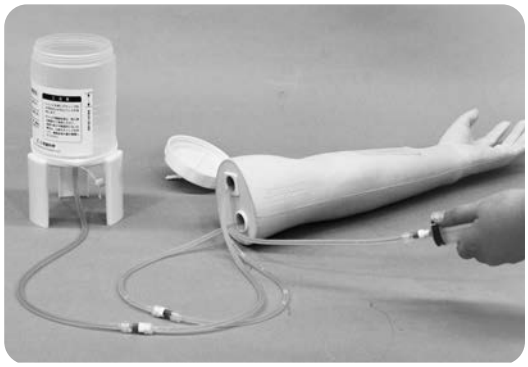
1 After the training

Discard the simulated blood from the pads and tubes after practice.

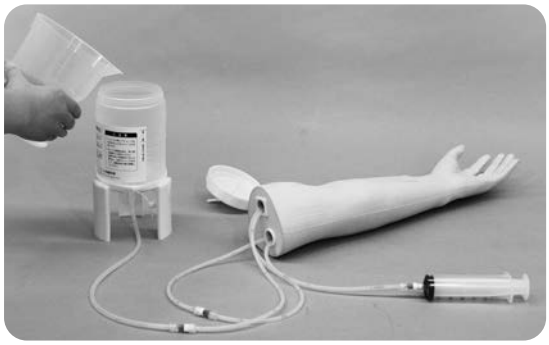
1. Discard the simulated blood left in the blood bottle.

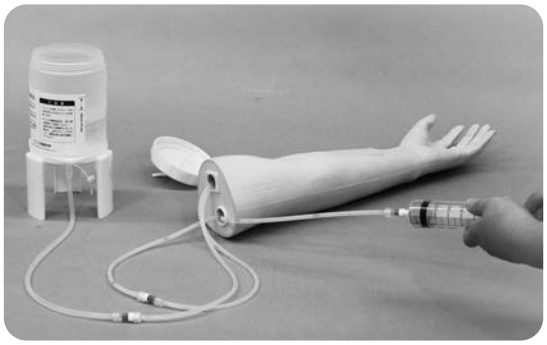


2. Connect the syringe (50mL) to the connector at the free end of the tube. Draw the piston slowly to pull the simulated blood in the tube. Discard the simulated blood in the syringe.



3. Pour approx. 50mL of water into the empty blood bottle. Then draw the water with the syringe to clean the inside of the tubes. Suck up the water to empty the tubes completely.





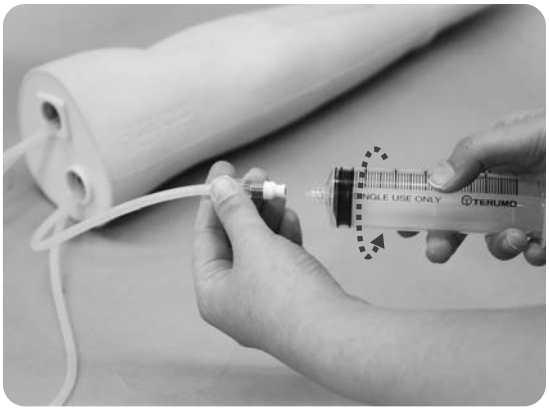
⚠ Caution

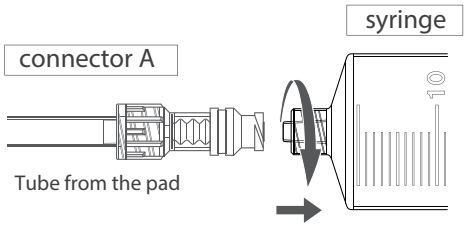
Always draw the piston of the syringe slowly and carefully.

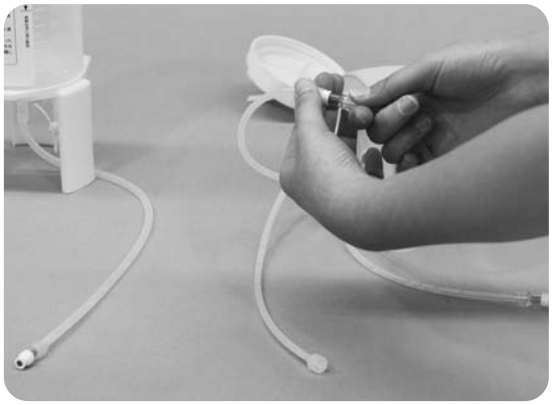
The tubes in the pads could be damaged if you push the piston of the syringe, which increases the internal pressure of the tube, or draw the piston too quickly.

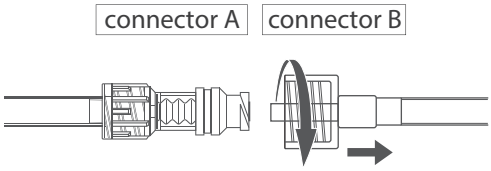
1 After the training

4. After the inside of the tubes is cleaned, disconnect the connectors that join the syringe and the tubes.









5. Slightly rotate the bottle for simulated blood counterclockwise to disengage the bottle from the stand to separate them.

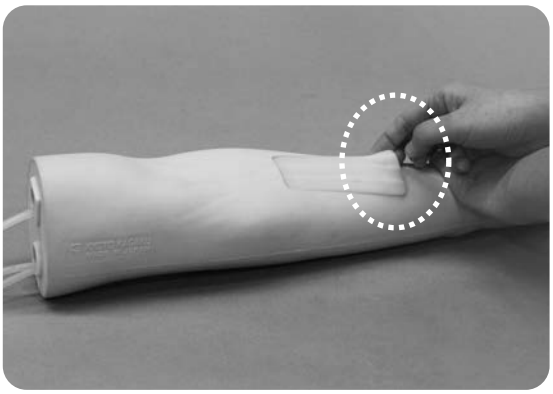
⚠ Caution

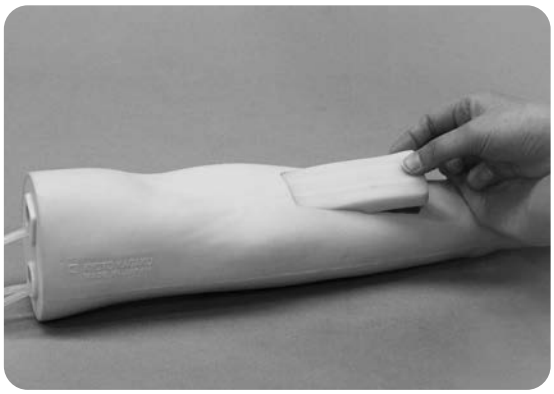
Store all the cleaned components in the storage case after they have dried completely.

Remove the injection pad

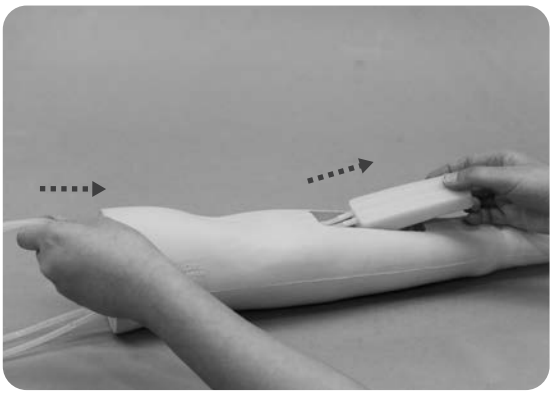
1 Remove the injection pad

1. Remove the pad from the arm model body by lifting up a corner of the pad on the periphery side.





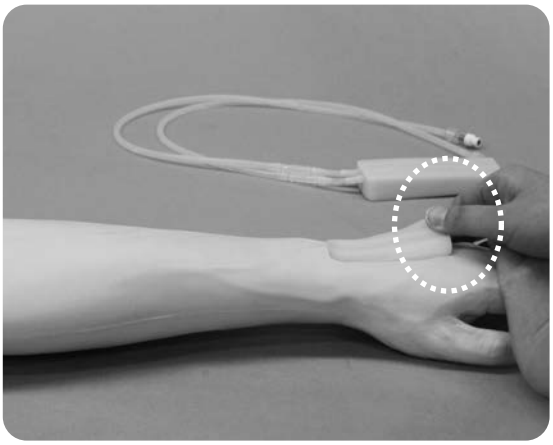
2. Pull out the tubes that run through the arm model body by drawing the Injection pad for median antebrachial vein after the pad is detached from the model.

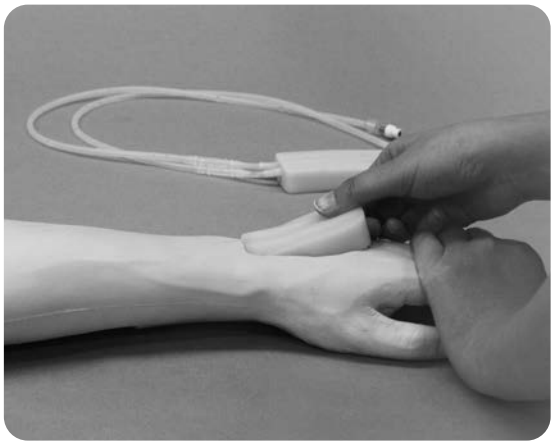


⚠ Caution

To remove it smoothly, pull off the pad from the arm model body while holding the tubes on the other side with one hand.

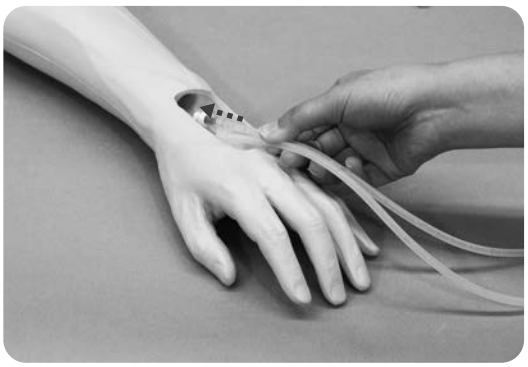
3. Remove the Injection pad for dorsal vein of hand following the same procedure.

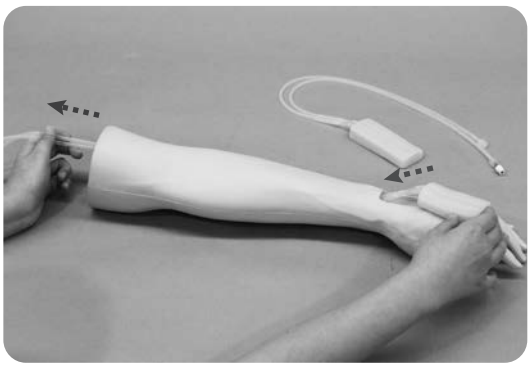




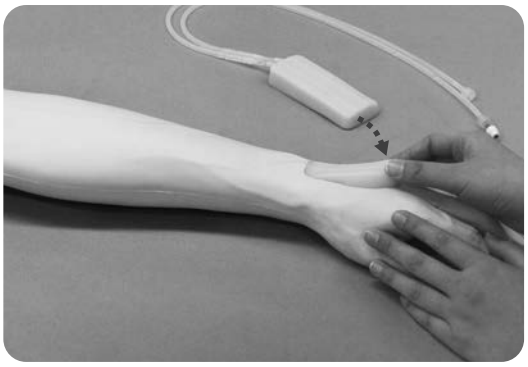
2 Installation the injection pad

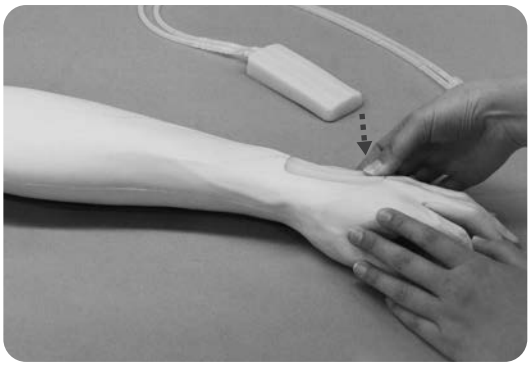
1. Insert the two tubes of the new injection pad into the hole in the trench of the pad. Push forward the tubes to the shoulder side of the arm model body. When the ends of the tubes come out from the hole on the shoulder side, pull the two tubes to guide them to the trench for the pad.



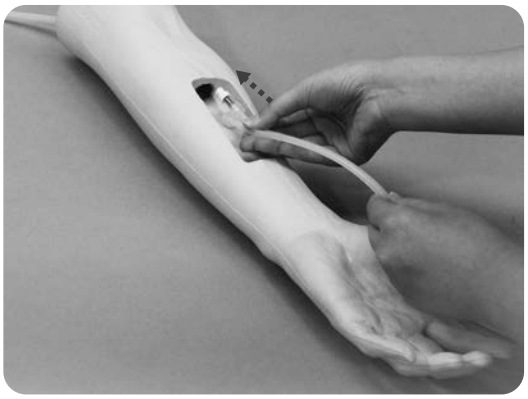


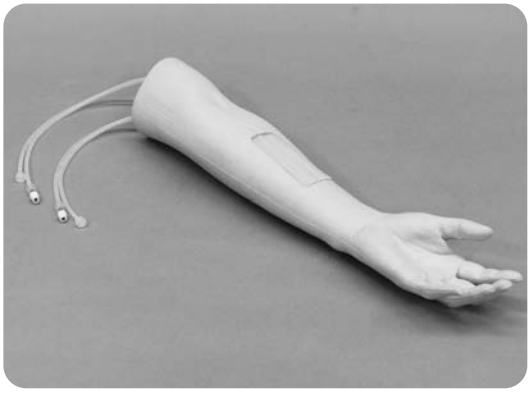
2. Insert the pad into the trench from the end on which the tubes are connected. Fit the other end into the periphery side of the trench.





3. Install the pad on the other side following the same procedure.





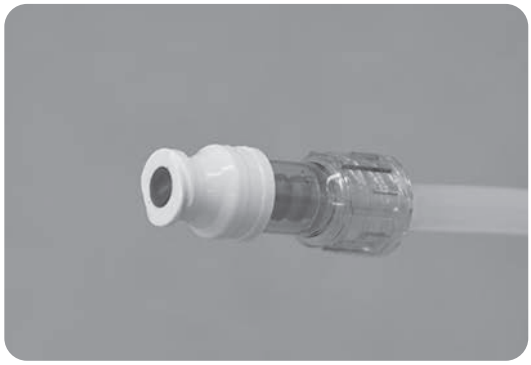
Now the replacement of the injection pads has been completed.

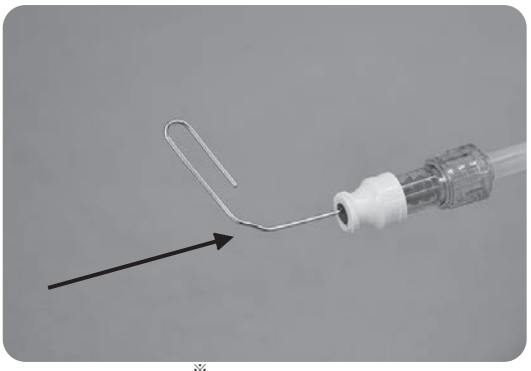
⚠ Caution

When inserting the tubes of the injection pad, always hold the pad by one hand and the tubes by the other hand. To avoid breakage of parts, do not pull the tubes to install the pad without holding the pad by hand.

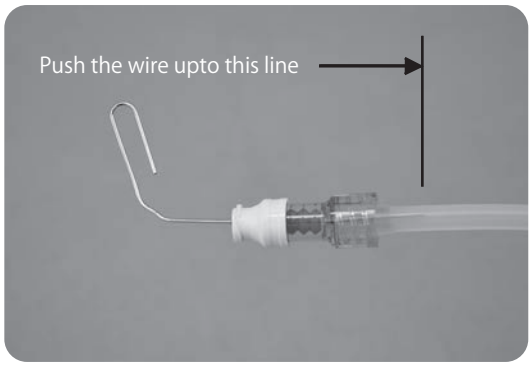
1 Testing the connector

In case the simulated blood cannot be injected in the tube by the syringe, the connector may be clogged. Test the connector as instructed below.

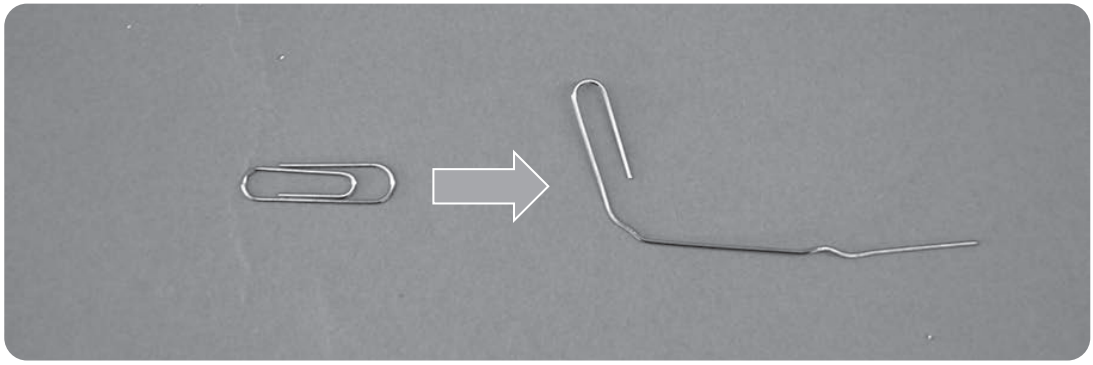




1.Insert a wire※ to the connector.



2. Push the wire until the tip of it appeares in the tube.



*Wire or stick can be prepared using a paper clip.

⚠ Caution Do not mark on the model with a pen or leave printed materials in contact with the model surface. Ink marks on the model are not removable.

For inquiries and service, please contact your distributor or KYOTO KAGAKU CO., LTD.

Consumable parts

code	name
11388-200	Injection pad for median antebrachial vein (a set of 2)
11388-300	Injection pad for dorsal vein of hand (a set of 2)
11388-400	Simulated blood (Swab type:a set of 10)

11388-200 Injection pad for median antebrachial vein (a set of 2)

11388-300 Injection pad for dorsal vein of hand(a set of 2)

11388-400 Simulated blood (Swab type: a set of 10)

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