TruNerveBlock
User Manual

Product Code: TNB100

Weight : 1.8Kg (Ultrasound insert = 800g and product plinth = 1Kg)

Dims: Plinth – 350mm x 150mm x 110mm ; Ultrasound insert -160mm x 140mm x 40mm

Package Contents:

- 1 TruNerveBlock unit (set-up time less than 5 minutes)
- Fluid pump mechanism and fluid tubes
- 1 Black carrier case
- 1 USB pen drive user manual
- 2 x 250ml Bottles TruUltra Gel
- 2 x 250ml concentrated blood
- Universal plug adaptor
- 2 x 20ml luer lock syringes
- 2 x luer lock adapters

Before you begin....

- Ensure the model is placed on a dry and flat surface
- Fill up the blood reservoir by using the blood concentrate to the levels needed (instructions on the bottle)
- Using the Adaptor connect the lead to the mains power
- Check the tubes are connected to the right area

Rev A
Approved R. Colhoun 8/4/19
Spray generous amounts of ultrasound gel on the product to ensure good probe imagery

Ensure your Ultrasound machine is placed close by to the product

You are now ready to use the model

**The TruNerveBlock is ideal for training a range of techniques including:**

**Nerve Bundle**

- Practice probe positioning and movement, recognition of arterial and vein vessels and nerves in soft responsive tissue. Using ultrasound to target the vessels and nerves for ultrasound guided regional anaesthesia and vascular access procedures

- Surrounding vessels are used as reference points to differentiate from the nerve

- Simulated anaesthetics can be injected into the model with visual air and fluid retention possible alongside the nerve

- Ability to verify needle tip location and to practice the entire regional anaesthesia procedure.

- Fluids can be easily removed from the product through our self-contained innovative fluid management system so that the product can be used repeatedly for training

- Using TruCorp’s’ unique ultrasound gel this creates a perfect medium to allow fluid retention and realistic muscle fluid absorption

- This ultrasound gel can be removed upon fluid build-up easily with a syringe and new gel inserted easily

- Once users accurately access the vessels within the model, positive fluid flow provides the user with positive feedback that they have cannulated the targeted vessel

- Visualizing of the artery and vein laterally beside the nerve

- High frequency linear array ultrasound probe can be used on the model

**IV**

- Colour Doppler detection of blood flow

- Realistic flashback upon entry into the vessel.

- Two embedded vessels, small/large and shallow/deep

- Real feel vascular ‘tenting’ upon entry into the vessel

- Self healing ‘TruUltra’ material that leaves minimal marks and self-regeneration
Bone

- An acoustic shadow artefact in the hypoechoic region deep to a hyperechoic bone outline
- Fracture assessment detection of a fracture and diagnosing bone stress

We recommend the following needle equipment sizes for optimal performance on the model:

- IV: 21G needle
- Nerve Block: 21G needle

First use:

1. Before you start using the product make sure that the insert is properly connected. To check the connectors, grab the insert from 2 sides and lift gently, until you will be able to see the connectors on the sides. If they are all connected, then everything is as it should be.
2. The product comes ready to use for Nerve Block training as it’s got the TruUltra fluid already pre-installed.

3. To use it for the IV you need to prepare the mock blood (you will need approx. 200ml to fill the blood reservoir container to the maximum level) and pour the blood into the black base using ‘B’ hole on the top (instructions on the bottle for blood mix ratios)
4. Connect the product to the socket. First use may require few minutes to allow the product to fill the blood completely. If the ultrasound image is not clear in the IV part, it may need to be compressed from the top in the place where the image is not clear.

Before:  

After:
Compressing:

**IV use** – The IV section of the model is the only part that fluid can both be administered and removed.

**IV vessels**

**Nerve Block Use** – It’s vital that the Nerve Block part of the model is only used to administer ‘artificial’ anaesthesia around the nerve. The vein and artery beside the nerve is only for visual use and should not be penetrated with a needle. Any damage occurred here will not validate a warranty replacement.
Nerve bundle with surrounding vein and artery

Bone Fracture
Replacing the insert.

1. To replace the insert switch off the pump from the socket.
2. Grab the insert on both sides, gently bend it and lift the insert starting from the blood fill side:
3. Disconnect all connectors:

4. Repeat the procedure on the other side; watch out for some blood spillage that could be left over.
5. Take the new insert and attach it to the connectors from the base, start with the side where the blood container is, always start with the black connector:

6. Slide the insert to the black plastic part until you won’t be able to see the connectors, if you feel resistance, try to move the tubes a little:
7. Bend the insert in the middle and connect it from the second side:
8. The product is ready to re-use:

9. The insert is prepared to connect and disconnect only one time.
Replacing the gel inside product:

1. To replace the internal TruUltra gel in the insert you will need: 2x 20ml luer lock syringes with the luer lock adaptors and the TruUltra gel.
2. After injections into the nerve area that total approx. 20 ml of anaesthesia liquid you will need to replace the TruUltra gel inside the product.
3. Connect the empty syringe to the ‘gel out’ connector and extrude/collect approx. 20ml of fluid- if there is a problem with taking out the gel, take the ultrasound probe gently squeeze the insert, moving the ultrasound probe from the ‘gel in’ side to the ‘gel out’ side.
4. Inject approx. 5-7 ml of new TruUltra gel, using ‘gel in’ connector.
5. Before you start using the product again make sure that the silicone caps are on the ‘gel in’ ‘gel out’ connectors.
Pump Safety instructions

1. Check that the voltage on the label of the pump corresponds to the voltage of the electricity supply. The Device must be powered by a differential switch which has a nominal current equal to or lower than 30mA.
2. The pump must not run without water to avoid damage to the motor.
3. Before connecting the pump to the electric network, check that the cable and the pump are not damaged.
4. The Pump has a Type Z cable link. The cable and the plug cannot be substituted or repaired; in case of damage to either one, the whole device must be sent back to TruCorp for replacement.
5. ATTENTION: disconnect all submersed electrical products before doing any maintenance to any appliance in the water or dipping the hand in the water. If the plug or the electric outlet is wet, disconnect the general switch before disconnecting the electric supply cable.
6. The pump can be used in appropriate liquids with a temperature not higher than 35 degrees or 95 degrees Fahrenheit.
7. Avoid using the pump with corrosive and abrasive liquids.
8. Do not use the pump for uses different to those for which it has been designed for.
9. The pump has not been designed for people with disabilities and/or children if they are not supervised by a person responsible for their safety.
10. The pump arrives submerged in the encased box, the pump is not to be removed and TruCorp take no responsibility for any damage caused by anybody that removes it unwilfully.
Care and Maintenance

Store in clean, dry conditions away from heat and direct sunlight; avoid contact with metals, solvents, oils or greases and strong detergents. When the product is not in use please store in the black carrier case provided.

Thoroughly wash the insert after use. Please use warm soapy water or something similar until all visible foreign matter and residue is removed. Taking care not to over scrub the surface.

Mild detergents or enzymatic cleaning agents may be used on the insert in accordance with the manufacturer’s instructions and at the proper dilution. The detergent must not contain skin or mucous membrane irritants.

Please do not use any of the following when cleaning the AirSim product range
- Germicides, disinfectants, or chemical agents such as glutaraldehyde (e.g. Cidex®),
- Ethylene oxide, phenol-based cleaners or iodine-containing cleaners

Warranty

TruCorp warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of 1 year from the date of delivery. This ensures that our customers receive maximum coverage on each product. If the unit should malfunction it must be returned to the factory for evaluation. Upon examination by TruCorp, if the unit is found to be defective it will be repaired or replaced at no charge.

TruCorp will pay for the freight/delivery and the actual parts needed free of charge if any part of the product fails within the 1-year period.

However, these warranties are VOID, if; the unit shows evidence of having been tampered with or shows evidence of having been damaged by excessive heat, the use of sharp instruments, misapplication, misuse or other operating conditions outside of TruCorp’s control. Additionally, continuous penetration of a needle into the artery or vein section of the nerve block area will cause internal damage and will not be covered by warranty if this area leaks. Components which wear or are damaged by misuse are not warranted and will be charged for if repair has been approved. Warranty is void if third party products are seen to have damaged or caused failure of the TruCorp models.
Please direct all warranty and repair requests/inquiries to:

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