

## **Blood Collection Protocol and Send-Out for Wren RNA Stabilization Tubes**

You have received a kit (transport box) with RNA Stabilization Buffer tubes for collection of venous blood for the evaluation of the NETest.

The Wren RNA Stabilization tubes contains a buffer that can preserve the NETest mRNA signature at room temperature for up to **SEVEN** days.

The kit is used to courier the blood sample directly to the London laboratory.

- RNA stabilization tubes can be stored at room temperature until used for blood collection (*collection protocol detailed below*).
- Each tube has an expiry date, and should not be used after this time. Expired tubes should be discarded directly into a biohazard bin or a sharps container.
- Once blood is collected into a tube, the NETest signature is stable for up to seven days at room temperature. Tubes can also be stored in the fridge (4°C). For longer storage, tubes should be frozen down and kept at -80°C in a freezer.
  
- ❖ **Ideally**, collected samples should be sent to the laboratory **within 2-3 days** via courier service.
  - Please use the kit that we provided.
  - **No ice or dry ice is required.**
  - **The kit with sample(s) should be sent at room temperature.**
- ❖ If samples **cannot** be sent within this time-frame (within 2-3 days of collection), they should be stored **frozen** in a **-80°C freezer** until send out. For send out of frozen samples:
  - Please use the kit that we provided.
  - **No ice or dry ice is required.**
  - The kit with **frozen sample(s)** should be sent at **room temperature**.

**DO NOT SEND BLOOD SAMPLES STORED FOR LONGER THAN SEVEN DAYS AT ROOM TEMPERATURE/IN THE REFRIGERATOR.**

**IF MULTIPLE SAMPLES ARE COLLECTED OVER SEVERAL DAYS OR WEEKS, STORE ALL SAMPLES AT -80°C UNTIL SEND OUT.**

## **BLOOD COLLECTION**

**Principle:** This procedure details the steps necessary for the collection of 2mL of whole blood from venipuncture into Wren RNA Stabilization tubes. The tubes are pre-filled with 4mL of stabilizing buffer. There are two options for collecting blood – using a butterfly – or collecting blood via a syringe.

### **OPTION 1: Butterfly Collection Protocol**

- Winged steel needle (23 gauge)
- With an extension tube (a butterfly) with an adaptor
- **No** gauges >25 because of hemolysis

#### **Perform standard venipuncture as follows:**

- Anchor the vein by holding the patient's arm and placing a thumb **BELOW** the venipuncture site.
- Ask the patient to form a fist so the veins are more prominent.
- Enter the vein promptly with needle at a 15-20 degree angle.
- Insert the collection tube into the adaptor.
- Collect **two (2) ml** of blood.
- The blood sample will be directly sucked into the Wren tube by the vacuum.
- Once the tube is full, remove from the adapter and invert ~10 times gently to mix the blood and reagent.
- Once blood has been collected, release the tourniquet **BEFORE** withdrawing the needle.
- Withdraw the needle gently and apply gentle pressure to the site with a clean gauze or dry cotton-wool ball.
- Ask the patient to hold the gauze or cotton wool in place, with the arm extended and raised.
- Ask the patient **NOT** to bend the arm, because doing so causes a hematoma.
- **Please ensure the tubes is correctly labelled.**
- Once collection is complete, it is extremely important to ***completely invert*** the tubes 8-10 times for complete mixing.
- **Storage: Either 2-3 days at room temperature before couriering or -80°C for longer storage.**

### **OPTION 2: Syringe Collection Protocol:**

- 16–18 Gauge **NEEDLE**
- 2-5ml syringe

#### **Perform standard venipuncture as follows:**

- Anchor the vein by holding the patient's arm and placing a thumb **BELOW** the venipuncture site.
- Ask the patient to form a fist so the veins are more prominent.
- Enter the vein swiftly at a 30 degree angle or less, and continue to introduce the needle along the vein at the easiest angle of entry.

- Collect **two (2) ml** of blood into the syringe.
- Once sufficient blood has been collected, release the tourniquet BEFORE withdrawing the needle.
- Withdraw the needle gently and apply gentle pressure to the site with a clean gauze or dry cotton-wool ball.
- Ask the patient to hold the gauze or cotton wool in place, with the arm extended and raised.
- Do not let the patient bend the arm, else a hematoma will form.

**Filling the Wren Laboratory sample tube:**

- Place the Wren tube into a rack before filling the tube.
- To prevent needle-sticks, use one hand to fill the tube or use a needle shield between the needle and the hand holding the tube.
- Pierce the stopper of the Wren lab tube with the needle directly above the tube, using slow steady pressure.
- Do not press the syringe plunger because additional pressure increases the risk of hemolysis.
- The blood sample will be directly sucked into the Wren tube by the vacuum.
- Once the tube is full, invert 10 times gently to mix the blood and reagent.
- If the vacuum does not suck in the sample, remove the rubber stopper and inject the blood extremely slowly into the Wren tube
- Reduce the risk of hemolysis when transferring blood through a needle on a syringe, by using low pressure/slow transfer of the specimen.
- **Please ensure all tubes are correctly labelled.**
- Once collection is complete, it is extremely important to **completely invert** the tubes 8-10 times for complete mixing.
- **Storage: Either 2-3 days at room temperature before couriering or -80°C for longer storage.**