

## **Technical Note**

## Filling QuantiFERON®-TB Gold blood collection tubes

The QuantiFERON-TB Gold In-Tube assay (QFT) measures the Interferon-gamma (IFN- $\gamma$ ) response in whole blood stimulated with antigen. The kit uses specialised QFT blood collection tubes. The following is a guide for blood collection into these tubes. (Catalogue No: 0590-0301).

## **FILLING TUBES**

QFT uses the following collection tubes

Nil Control (Grey cap)
TB Antigen (Red cap)
Mitogen Control (Purple cap)

Antigens have been dried onto the inner wall of the blood collection tubes so it is essential that the contents of the tubes be thoroughly mixed with the blood. The tubes must be transferred to a 37°C incubator as soon as possible and within 16 hours of collection.





The following procedures should be followed for optimal results:

- If tubes have been stored in the refrigerator, allow them to equilibrate to room temperature before use.
- For each subject, collect 1 mL of blood by venepuncture directly into each of the QFT blood collection tubes in the order Nil, TB-Antigen and Mitogen.
  - As 1 mL tubes draw blood relatively slowly, keep the tube on the needle for 2-3 seconds once the tube appears to have completed filling—to ensure that the correct volume is drawn.
- The black mark on the side of the tubes indicates the 1 mL fill volume. QFT blood collection tubes have been validated for volumes ranging from 0.8 to 1.2 mL. If the level of blood in any tube is not close to the indicator line, it is recommended to obtain another blood sample. As a guide, the picture on the left illustrates the approved fill range.

If a "butterfly needle" is being used to collect blood, a "purge" tube should be used to ensure that the tubing is filled with blood prior to the QFT tubes being used.





## **MIXING TUBES**

The QFT blood collection tubes' contents have been sprayed onto the inner wall of the tubes. To optimise the performance of the test, it is essential that the tubes' contents be thoroughly mixed with the blood. Thorough mixing will dissolve the heparin, preventing clotting, and allow resolubilisation of the stimulating antigen. Mixing is performed by vigorously shaking the tubes up and down for 5 seconds (10 times) to ensure that the entire inner surface of the tube has been coated with blood. Proper shaking will lead to frothing of the blood.

 The tubes must be transferred to a 37°C incubator as soon as possible, and within 16 hours of collection. Do not refrigerate or freeze the blood samples. Tubes should be incubated upright.

If the blood is not incubated immediately after collection, mixing of the tubes must be repeated immediately prior to incubation.

**Note** QuantiFERON-TB Gold blood collection tubes are intended for use at temperatures between 17°C (72°F) and 27°C (81°F) as detailed in the Package Insert. Ensure tubes are within this temperature range before use. Use outside this prescribed temperature range can produce erroneous results.

Further information on mixing QFT tubes—including an instructional video—can be found at www.cellestis.com



A correctly mixed tube.

For more information, please contact the Cellestis office nearest you or visit www.cellestis.com.

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