

Test for diagnosis of Brugian filariasis

The Brugia Rapid test has been shown to be a useful and sensitive tool for the detection of *Brugia malayi* and *Brugia timori* antibodies and is being used widely by lymphatic filariasis elimination programs in *Brugia* spp. endemic areas. Although the test is relatively simple to use, adequate training is necessary to reduce inter-observer variability and to reduce the misreading of cassettes.

Basic Guidelines

- Cassettes are currently known to have a limited shelf life at ambient temperatures (18 months at 25°C) but longer shelf life when stored at 4°C (approximately 24 months). Cassettes and buffer solution should NOT be frozen.
- Thirty-five microliters of blood should be collected by finger prick into a calibrated capillary tube coated with an anticoagulant (EDTA or heparin). Alternatively, finger prick blood can be collected into a microcentrifuge blood collection tube coated with either EDTA or heparin.
- Although not required, transporting cassettes for use in the field in a cool box is recommended. Care should be taken not to expose cassettes to extreme heat for prolonged periods of time.
- Cassettes must be read using adequate lighting. Faint lines can be difficult to see when lighting is not adequate.

Test Procedure

1



Bring test cassette and chase buffer to room temperature. Remove cassette from foil pouch just prior to use. Label the cassette with sample information.

2



Collect 35µL blood by finger prick using a calibrated capillary tube OR measure 35µL of blood from a microcentrifuge tube using a micropipettor. **DO NOT** add blood directly from the finger to the cassette.



3



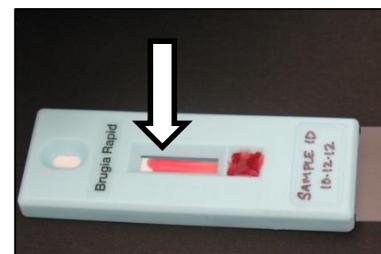
Add blood sample slowly to the square well by touching the capillary tube or pipette tip to the sloping side of the square well.

NOTE: If using serum or plasma, only 30µL is needed.



Add one drop of chase buffer to the same square well.

NOTE: If using serum or plasma, no chase buffer is required after adding the sample to the square well.



The sample will start to flow up the strip. The cassette can be tapped gently on the table to facilitate the flow. Wait until the sample has reached the blue line (A).

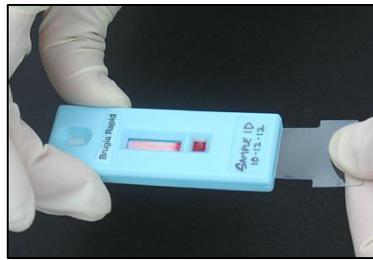
NOTE: If the sample does not reach the blue line (A) after four minutes, but has reached the area of line B, proceed to the next step.

4

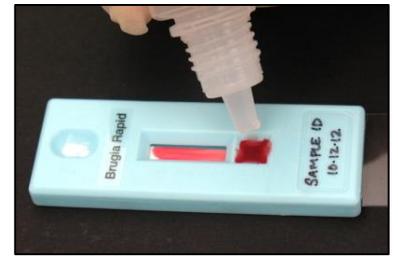


When the sample has reached the blue line (A), add three drops of chase buffer to the circle well at the top of the cassette.

NOTE: Add the buffer drop by drop and allow each drop to saturate the pad before delivering the next drop.



Firmly pull the clear tab at the bottom of the cassette until resistance is felt.



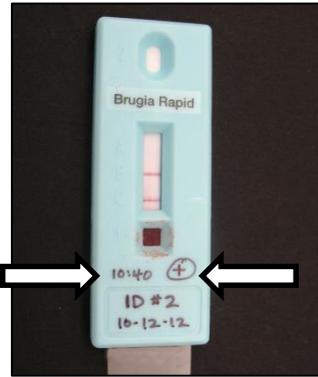
After pulling the clear tab, add one drop of buffer to the square well.

5



Start timing. Read test results 25 minutes after adding the final drop of buffer.

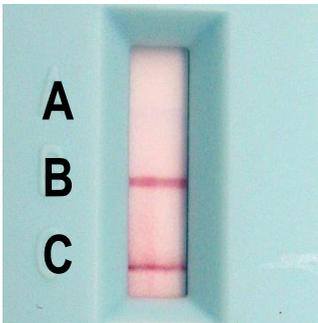
NOTE: Test results should be read at 15 minutes for serum/plasma samples.



NOTE: It is helpful to record the start or end time on the front of the cassette.

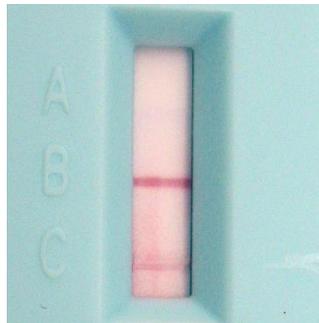
Write the appropriate result on the front of the cassette to create a permanent record.

Test Interpretation



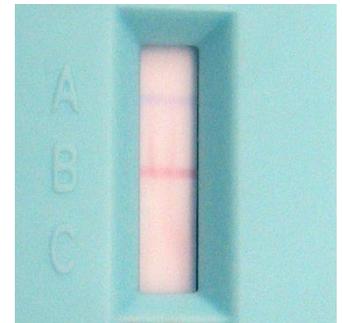
POSITIVE

B and C lines present



POSITIVE (weak)

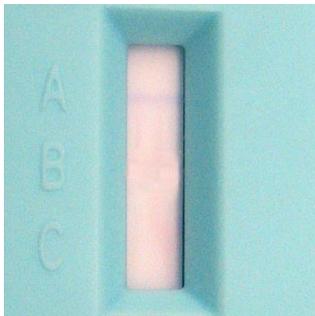
B and C lines present



NEGATIVE

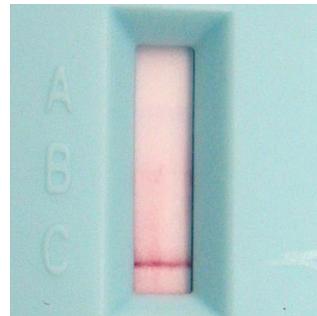
B line appears; no C line present

A* = blue line
B = control
C = test line



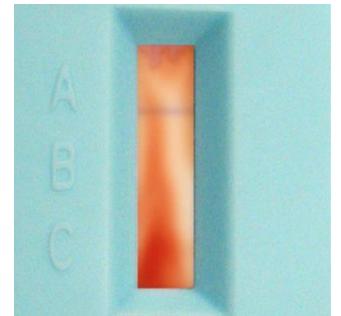
INVALID

No B or C lines present



INVALID

No B line present; C line appears



INVALID

Blood did not clear