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USAMRMC

ARTHROPOD VECTOR RAPID DETECTION DEVICES

The Arthropod Vector Rapid Detection Device (AVRDD) is an immunochromatographic membrane assay that uses colloidal gold-labeled antibodies to detect and identify specific parasites or viruses in a target arthropod vector. These antibodies are impregnated on a sample pad and combined with a test strip. The 'Test Line' contains antibodies specific for the pathogen or virus and the 'Control Line' contains control antibody. The AVRDD is packaged as a kit containing all the supplies needed to test 20-50 'pools' of arthropods, which each 'pool' containing between 1-50 individual target arthropods. These kits can be used across the full range of military operations.



MALARIA



LEISHMANIASIS

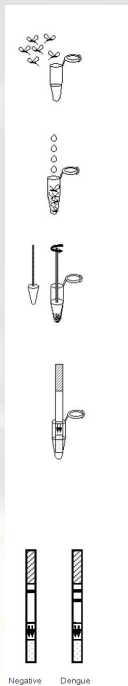


DENGUE



The Arthropod Vector Rapid Detection Devices (AVRDD) are hand-held assays that can be used to determine whether arthropods are infected with pathogens capable of infecting deployed personnel.

To perform a test, collected arthropods are placed in the plastic tube along with the proprietary grinding buffer, all included in the kit. A small hand-held pestle is used to grind or homogenize the sample and then the test strip is placed in the tube with the sample. The 'Control Line' will appear to indicate the assay is working, and the 'Test Line' will appear if the target parasite or virus was detected, indicating a positive result. No 'Test Line' indicates a negative result or no parasite or virus detected.



Procedure Outline

1. Place collected arthropods into the conical grinding tube provided in the kit. Place the tube into the tube stand provided.
2. Dispense 250mL of Grinding Solution from GS bottle onto the arthropods.
3. Place the pestle provided in the kit into the grinding tube and vigorously rotate it to homogenize the arthropods. The pestle can be reused if washed between uses.
4. Place a test strip from the canister into the mosquito suspension in the grinding tube with the arrows pointing down. Replace the desiccant cap on the canister to protect the remaining strips from moisture. Wait for the test to be completed. Results can be read ~20-30 minutes or later.
5. Determine the test results by removing the test strip and comparing it to the pictorial sample provided to the right.

Ordering Information

Malaria AVRDD NSN 6550-01-551-5327; Dengue AVRDD NSN 6550-01-602-7751
Leishmania AVRDD NSN anticipated in June 2012 (waiting on AFPMB approval)

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Development Partners

USAMMDA, WRAIR, MIDRP,
USAMRIID, USARU-Kenya,
Vector Test Systems, Inc.