

## **Comparison Evaluation of Canine Heartworm Diagnostic Tests Commercially Available in Korea**

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**Purpose:** The sensitivity and specificity of rapid diagnostic tests for canine heartworm disease commercially available in South Korea were evaluated using autopsy blood plasma or whole blood of 45 necropsy-confirmed heartworm-infected dogs.

**Materials and Methods:** The test kits included in the evaluation were 7 diagnostic tests commercially available in Korea. The specificity of non-infected dog were examined by using 17 autopsy whole blood samples from non-infected dogs, and the sensitivity was evaluated by using the EDTA-anticoagulated autopsy whole blood samples collected from 45 dogs naturally infected with *Dirofilaria immitis*. Test results were compared with the number of heartworms upon necropsy.

**Results:** All seven test kits resulted in 100% specificity. In the sensitivity analysis using 45 autopsy blood plasma or autopsy whole blood samples, the test kits revealed various sensitivities ranging from 53.3 - 82.2%. Both SNAP 4Dx and 3Dx tests manufactured by IDEXX Co. showed the same highest sensitivity of 82.2%.

**Conclusion:** The results suggest that the sensitivity of heartworm antigen tests commercially available in Korea is varied and can be misleading especially for the diagnosis of canine heartworm disease with low worm burden.

Key words: *Dirofilaria immitis*, diagnosis, antigen test

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