

PROCEEDINGS



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Sensitivity and specificity of RAPID™ and RAPID™ 2.0 canine heartworm antigen test Kits.
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The primary objective of this study was to confirm the sensitivity and specificity of a new generation of canine heartworm antigen test kits (RAPID™ and RAPID™ 2.0) for in-clinic use. The RAPID™ test requires only 1 drop of sample followed by 4 drops of assay diluent into the sample well. The RAPID™ 2.0 test requires only 2 drops of sample into the sample well (no assay diluent is needed). The results are read after about 5 minutes for both tests.

Overall, 109 sera were used: The negative group included 54 sera and the positive group included 55 positive sera. All positive sera were obtained from dogs with confirmed presence of heartworms at necropsy. Samples were randomized and the investigator was blinded during the study. Both RAPID™ and RAPID™ 2.0 gave the same results. The specificity found was 100% (54/54). A breakdown by the number of female heartworms recovered at necropsy showed a sensitivity of 85% (11/13) in samples with 1 female worm recovered at necropsy, 100% (12/12) in samples with 2 female worms recovered at necropsy and 100% (30/30) in samples with 3 or more female worms recovered at necropsy.

Conclusion: RAPID™ and RAPID™ 2.0 canine heartworm antigen test kits appear to be the most sensitive heartworm antigen test kits compared to other in-clinic test kits on the US market today. Indeed, a previous study (J.M. McCall *et al*) showed that SNAP Heartworm PF has a sensitivity of 76.2%, 85% and 100%, that HESKA Solo Step CH has a sensitivity of 76.2%, 95% and 96.5%, while WITNESS HW has a sensitivity of 71.4%, 90% and 94.7% for 1, 2 and 3 female worms respectively.