

RSID-Blood Does Not Cross React with Animal Blood

Problem: Currently available hemoglobin-based forensic tests for human blood cross react with animal (ferret, skunk) and primate blood. Both hemoglobin-based and chemically based blood detection tests can provide false positive results from forensic samples.

Solution: Develop test that is specific for human blood.

Experiment: Test RSID-Blood for specificity with a variety of animal blood extracts including ferret, skunk and primates.

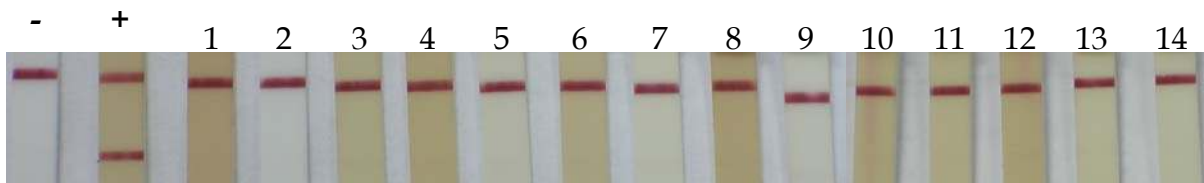
Methods: Prepare extracts from various animal species: drop 50 μ l of blood from the indicated species on a sterile cotton swab; dry and extract overnight in 1 ml of provided RSID-Blood extraction buffer (overnight extraction was used in order to provide a more stringent test of RSID-specificity).

One hundred microliters (100 μ l) of extract was applied to the sample well of an RSID-Blood cassette; results were scored after 10 minutes.

Positive control: 50 μ l of human blood on a cotton swab was extracted overnight in 1 ml of provided extraction buffer; 20 μ l was used as positive control (+).

Negative control: Unused cotton swab was extracted overnight in 1 ml of provided extraction buffer; 100 μ l was used as negative control (-).

Assuming reasonable extraction efficiency, the equivalent of 5 μ l of ferret (1), skunk (2), dog (3), cat (4), cow (5), pig (6), chicken (7), horse (8), goat (9), orangutan (10), gorilla (11), spider monkey (12), pygmy chimp (13), and baboon (14) was tested on RSID-Blood.



Additional species tested include: opossum, owl, turtle, elk, deer, tiger, alpaca: no cross reaction observed.

Results: No cross reaction observed with any animal species tested. Strips have been removed from cassettes for clarity.

Conclusions: **RSID-Blood is a confirmatory test for human blood.**