

## RSID<sup>®</sup>-Blood Does Not Exhibit False Negative Results Due to a High Dose Hook Effect

**Problem:** Current hemoglobin-based tests for blood exhibit a high dose hook effect (HDHE) that can produce false negative results from forensic samples.

**Solution:** Produce a confirmatory test for human blood that does not exhibit HDHE and therefore greatly reduce the chances of false negative blood.

**Experiment:** Compare RSID-Blood side by side with a hemoglobin-based blood detection test.

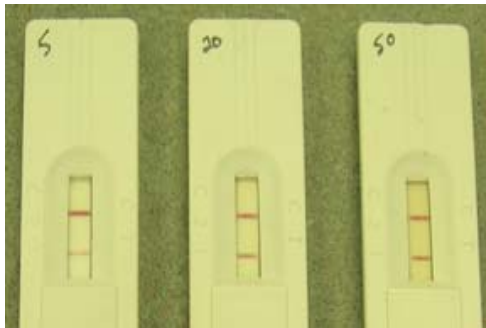
**Methods:** A standard extract of human blood was prepared and tested on RSID-Blood and on Seratec HemDirect Hemoglobin Assay. Extract was prepared using 50  $\mu$ l of human blood from a cotton swab, extracted overnight in 1 ml of RSID-Blood Extraction Buffer (equivalent 50 nl of human blood per microliter of extract).

*Negative control:* Sham extract (sterile swab extracted in 1 ml of RSID-Blood Extraction Buffer) was used as negative control.

Extracts were adjusted to a final volume of 100  $\mu$ l with RSID-Running buffer.

### RSID-Blood

250 nl      1  $\mu$ l      2.5  $\mu$ l



equivalent volumes human blood

### HemDirect

250 nl      1  $\mu$ l      2.5  $\mu$ l



equivalent volumes human blood

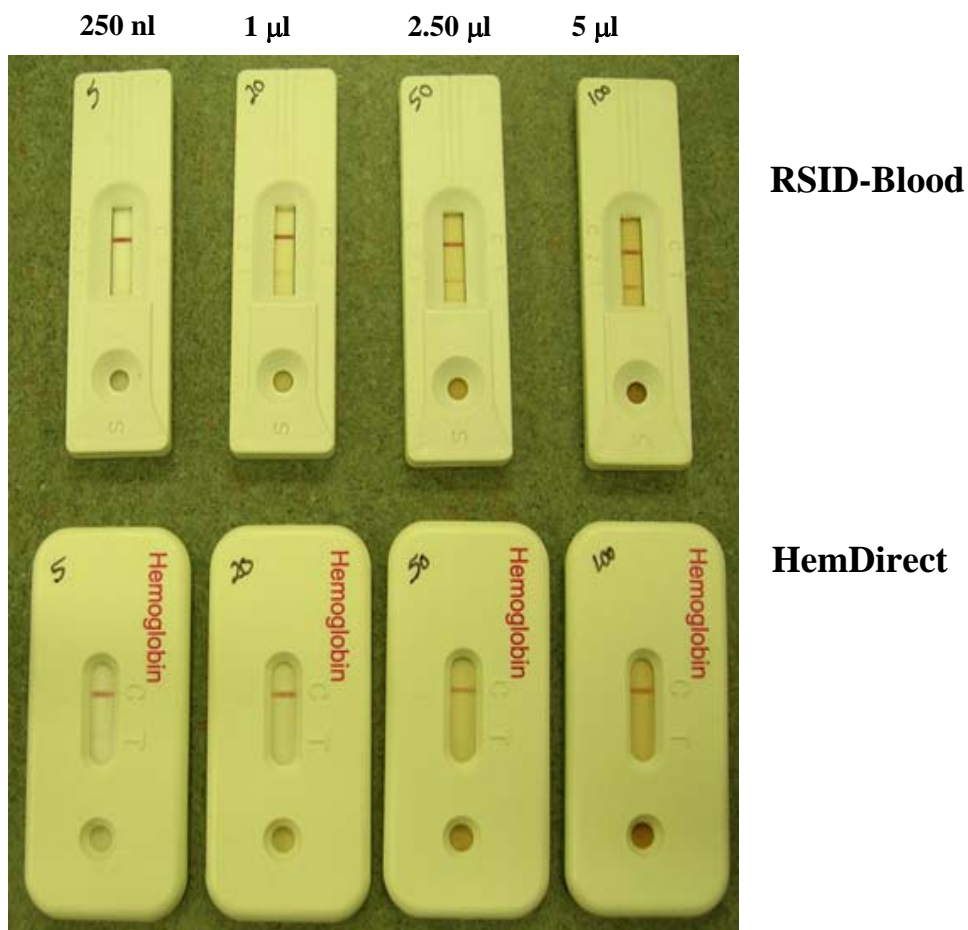
**Conclusion:** HemDirect Hemoglobin test demonstrates false negative results for samples that are clearly positive when tested with RSID-Blood. Test results for 1  $\mu$ l and 2.5  $\mu$ l of human blood shown.

**Experiment:** Test RSID-Blood and HemDirect with extract prepared using HemDirect supplied extraction buffer.

*Human Blood extract:* prepared as above, but using HemDirect supplied extraction buffer

*Negative control:* Sham extract of unused swab using HemDirect supplied extraction buffer.

**Equivalent volumes Human Blood**



**Conclusion:** HemDirect Hemoglobin test demonstrates false negative results for samples that are clearly positive when tested by RSID-Blood. Test results for 1  $\mu$ l and 2.5  $\mu$ l and 5  $\mu$ l of human blood shown.

**RSID-Blood does not exhibit a significant high dose Hook effect.**