

Independent Forensics
Field Kit for Rapid Stain Identification
Of Human Semen (RSID™)
Provided Protocols

General Guidelines

The RSID™-Semen Field Kit is designed for fast, easy, and reliable detection of human semen from stains encountered at crime scenes. RSID™-Semen Field Kit testing will assist investigators in determining which samples are the most likely to yield DNA profiles. All of the materials needed to perform stain analysis on 5 individual samples in the field are provided. Single use, individually packaged components eliminate the possibility of sample contamination.

Components of the RSID™-Semen Field Kit

- *Swab wetting water*- bottle containing 10 ml of sterile water.
- *Five clear plastic bags* - each bag contains the components needed to sample an individual stain: RSID™-Semen cassette, scissors, plastic transfer pipette, and cotton swabs. Bag components are intended for single use only.
- *Five sealable envelopes* - for documentation of results and transportation of used cassettes.
- *Five sample tubes*- each with pre measured (700 µl) extraction /running buffer.
- *Sample tube rack*- holds tubes during extraction.

Sample Collection

When possible, stains deposited on fabric or other substrates that can be easily cut, should be dissected to preserve a portion of the stain for DNA analysis.

The recommended cutting size for the RSID™-Semen Field Kit is approximately 10-20 mm². The following figures demonstrate the recommended cutting size:



Stains deposited on substrates that cannot be easily cut (e.g., glass, metal) should be sampled by sponging the stain with a swab moistened in the provided water. The swab can be moistened by quickly dipping the swab into the water. When analyzing a large stain, reserve a portion of the stain for possible DNA analysis.

When testing a small stain, sponge the entire stain with a moistened swab and test a portion of the swab

batting by removing a cutting of the swab with the provided scissors. The remainder of the swab should be preserved for additional analysis (e.g., RSID™-Saliva, RSID™-Blood, DNA analysis, etc.)

Protocol

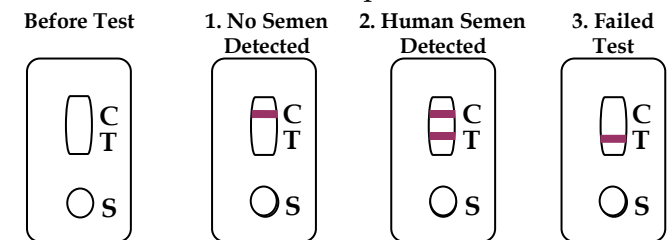
1. Remove plastic bag containing single use components.
2. Take cutting (from stain or swab) and place it into the extraction tube (see *Sample Collection*, above).
3. Close extraction tube and shake vigorously.
4. Incubate sample in extraction buffer for a minimum of 20 minutes at room temperature.*
5. After incubation / soak step, remove RSID™-Semen cassette from sealed foil pouch.
6. Vigorously shake extraction tube and using provided transfer pipette, place **4 drops** of extraction solution into the sample well of the cassette (circular well indicated by "S" on the cassette). Note time.
7. After 10 minutes, score cassette as positive or negative based on the presence or absence of a red line at the test position. See *Result Interpretation*, below.
8. Document the results and information regarding the sample. We recommend photo documentation prior to discarding used cassette.

**Longer incubation and soak time are recommended for older evidence samples or for questioned samples with minimal biological material. We have noted only a minor increase in test sensitivity after 50 minutes of incubation.*

Result Interpretation

RSID™-Semen should be evaluated exactly 10 minutes after sample addition. Possible results are:

1. A single red line at the Control (C) position indicates that *no* semen was detected.
2. Two red lines (at both the Control, C, and Test, T, positions) indicate that *human semen* was detected.
3. A single red line at the Test (T) Position indicates a failed test, no conclusion possible.



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