

SER: Semen Examination

Principle

Semen consists of spermatozoa from the testicles and seminal fluid from other sex glands. Seminal fluid contains enzymes (such as acid phosphatase) and other proteins (including p30 and semenogelin).

When testing evidence items for the presence of these components, analysts may get results indicating or confirming the presence of semen or seminal fluid.

Evidence examination

If the item is not a swab, the evidence examination begins by locating the stain. Stains may be located by

- physical appearance- crusty yellow to white stain, depending on age, substrate, and exposure to other fluids
- alternate light sources
- tactile examination
- chemical mapping
- stereomicroscopic examination

Once located, stains should be properly documented and then analyzed for the components of semen.

Once a potential semen stain is located on an item of evidence, the appropriate tests are selected by the analyst given the evidence type and case history.

Enzyme

An enzyme found in high concentration in seminal fluid is acid phosphatase (AP).

To examine an item for the presence of acid phosphatase, refer to [*SER: Seminal Fluid- Acid Phosphatase Spot Test*](#).

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Proteins

Seminal fluid contains proteins including p30 and semenogelin.

To examine an item for the presence of p30, refer to [SER: Seminal Fluid-ABAcad p30 Immunoassay Test](#).

To examine an item for the presence of semenogelin, refer to [SER: Seminal Fluid- Semenogelin Rapid Stain Identification \(RSID\) Semen Test](#).

Spermatozoa

The cellular component unique to semen is spermatozoa.

To microscopically examine an item to identify spermatozoa, refer to [SER: Spermatozoa- Microscopic Examination](#).

Interpretation

Generally, if an evidence item is found to contain spermatozoa and components of seminal fluid, it may be reported as “semen” or a “semen stain.”

However, if only components of seminal fluid are detected and no spermatozoa are identified, it may be reported as “seminal fluid.”
