

## SER: Glossary

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**ABAcardp30** A commercially available assay for semen that uses a conjugated dye-labeled antibody which forms a complex with the p30 antigen

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**Acid Phosphatase** Seminal acid phosphatase (AP) is an enzyme produced in the prostate gland whose presence serves as a presumptive test for semen.

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**Amylase** An enzyme responsible for the breakdown of starch. It is found in high concentration in saliva.

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**Anode** A positive electrode.

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**Antibody** A protein with specific receptor sites formed in response to an antigen.

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**Antigen** A substance which can stimulate an immune response when introduced into a host.

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**Antiserum /  $\alpha$  serum** Serum containing antibodies that are specific for one or more antigens.

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**Buffer** A solution that resists change in pH when an acid or base is added.

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**Cathode** A negative electrode.

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**Confirmatory test** An independent and specific second test to verify positives from presumptive/screening tests.

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**Crossover electrophoresis** Electrically accelerated union and precipitation of antigen and antibody in a gel.

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## SER: Glossary, Continued

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<b>Denaturation</b>	Loss of the natural configuration of a molecule through heat, chemical treatment, or pH change.
<b>Electrophoresis</b>	The movement of charged particles in a medium when an electric current is applied.
<b>False positive</b>	A test result that is erroneously positive.
<b>Fluoresce</b>	To emit visible light when exposed to light of a shorter wavelength - i.e. ultraviolet light.
<b>Hemastix®</b>	A commercially available strip that can be used as a presumptive test for blood.
<b>Hemo-chromogen</b>	Insoluble, pink, needle-shaped crystals observed with a positive Takayama test.
<b>Hemoglobin</b>	A red blood cell protein responsible for transporting oxygen.
<b>Kastle-Meyer</b>	A presumptive color test for blood that relies on the peroxidase-like activity of the heme-group in red blood cells.
<b>Ouchterlony test</b>	A species of origin test for blood and tissue.
<b>p30</b>	A protein found in semen produced in the prostate gland.
<b>Peroxidases</b>	Enzymes that accelerate the oxidation of several classes of organic compounds by peroxides.

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## SER: Glossary, Continued

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**Precipitin reaction**

An antigen-antibody reaction that forms a precipitate.

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**Presumptive test**

A chemical screening test which establishes by production of color or light that a sample is possibly a body fluid of forensic interest (i.e. blood, semen, etc.)

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**Radial diffusion**

A test in which a liquid is loaded into a gel containing the other reactant allowing the liquid to diffuse into the gel.

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**RSID™ Semen**

A commercially available assay for semen that uses two monoclonal antibodies specific for semenogelin, a protein found in semen.

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**Saliva**

Oral secretion comprised of water, mucus, proteins, salts, and enzymes.

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**Semen**

A thick whitish fluid that is produced during ejaculation by male mammals and carries sperm cells.

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**Semenogelin**

A protein found in semen produced by the seminal vesicles.

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**Spermatozoa**

The mature fertilizing gametes of a male organism specific to semen. (singular) sperm cell, spermatozoon, zoosperm.

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**Standards**

A condensed and compact set of authentic specimens which should contain a true cross section of the material from a known source.

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**Takayama test**

A confirmatory crystal test for blood based on the formation of the hemoglobin derivative crystal hemochromogen.

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**Urea**

Nitrogenous compound found in high levels in urine.

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