

This DNA Glossary can also be found as an appendix in our book
An Introduction to Forensic DNA Analysis
<http://forensicsdna.com/Bookstore/index.html>

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Glossary

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| 9477A | Name of the positive control used in STR forensic DNA analysis in the U.S. |
| A | Single-letter designation of the base adenine; one of the four building blocks of DNA. |
| ABC | American Board of Criminalistics, the oversight body for certification of criminalists. |
| Accreditation | Crime Laboratories can be accredited for forensic testing. Accreditation of a Crime Laboratory means that the lab meets minimum professional standards for general operations. |
| Acrylamide | (see <i>polyacrylamide</i>) |
| Adenine | One of the four chemical building blocks of DNA. |
| AFIS | Automated Fingerprint Identification System. |
| Agarose | Gel medium used for separation of DNA fragments in a variety of tests, including yield gels, digest gels, PCR product gels and RFLP analytical gels. |
| Allele | One of two or more alternative forms of a gene or genetic marker. |
| Allele Frequency | The relative occurrence of a particular allele, or gene form, in a population. |
| Amelogenin | The locus at which gender may be determined in forensic typing systems. |
| AMP-FLP, AFLP, AMFLP | Amplified Fragment Length Polymorphism; a length polymorphism (VNTR) analyzed using PCR. D1S80 is analyzed as an AMP-FLP. |
| Artifact | A spurious result caused by or during the analysis; extrinsic to the sample itself |
| ASCLD | American Society of Crime Laboratory Directors. |

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| ASCLD/LAB | American Society of Crime Laboratory Directors Laboratory Accreditation Board. |
| ASO | Allele specific oligonucleotide. A technically incorrect name for a short synthetic probe used to pinpoint a specific sequence using hybridization. (see <i>SSO</i>) |
| Association | Concept used in crime scene reconstruction; description of relationship between two objects, items, or people. |
| Autoradiogram, Autoradiograph, Autorad | An X-ray film on which radioactively or chemiluminescently labeled probes have left a mark determining the positions of particular DNA fragments; (see <i>Lumigraph</i>). |
| Autosome | Any chromosome other than the sex chromosomes, X and Y. |
| Band | The visual image representing a particular DNA fragment on an autorad. |
| Band Shift | The phenomenon in which DNA fragments in one lane of a gel migrate at a rate different from that of identical fragments in other lanes of the same gel. |
| Base | A subunit of nucleic acid. Technically, the base is the portion of a nucleotide that makes it an A , G , T , C , etc. The term is often used informally in discussing the nucleotide “residues” in a DNA or RNA molecule. |
| Base Pair | Two complementary bases held together by chemical bonds; complementary base pairing occurs between A and T and between G and C . |
| Bayes’ Theorem | A formal theory of probability used to evaluate competing hypotheses in the context of specific information. It incorporates but is not wholly defined by a likelihood ratio. |
| Biallelic, Diallelic | A locus at which only two alleles are found. |
| Binning | A method used to assign allele frequencies in constructing a population database. All the alleles in a bin take on the frequency of the entire group. Also, one of the steps used in assigning an allele designation to an STR product based on fragment length. |
| C | Single-letter designation of the base Cytosine; one of the four building blocks of DNA. |
| CACLD | California Association of Crime Laboratory Directors. |
| Capillary Electrophoresis (CE) | A method used to separate DNA fragments of different sizes using a liquid polymer inside of a very narrow length of tubing. |

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| Ceiling Principle | A now defunct calculation, that was originally endorsed by the NRC I committee, to multiply allele frequencies to determine the strength of a genetic concordance. It states that for each allele in a product calculation, the highest frequency among the groups sampled, or 5%, must be used, whichever is larger. (<i>also see</i> Interim Ceiling Principle) |
| Cell | Basic building block of an organism. |
| Centromere | The central element of a chromosome. |
| Certification | Forensic scientists (criminalists) can be certified for DNA testing. Certification in Molecular Biology of a forensic scientist (criminalist) means that the analyst has demonstrated the minimum professional knowledge, skills, and abilities to perform DNA testing. |
| Chelex | Chemical used in DNA extraction. |
| Chelex Extraction | One method of isolating DNA from cells. |
| Chromosome | The structure by which hereditary information is physically transmitted from one generation to the next; the organelle that carries the genes. |
| Circumstantial Evidence | Any evidence in a case for which an inference is needed to relate it to the crime. Not observed by an eyewitness. Most physical evidence, with the exception of blood alcohol determination and drug identification, is circumstantial. DNA evidence is circumstantial. |
| Class Characteristic | Characteristics of an item that put it in a class with other similar items. |
| Coding region | A region of DNA that has the capability of producing a protein. |
| CODIS | <u>C</u> ombined <u>D</u> NA <u>I</u> ndex <u>S</u> ystem – a series of local, state and national computer applications and databases. |
| Complementary Base Pairing | (see <i>Base Pairing</i>) |
| Conservative Estimate | An estimate designed to deliberately overestimate the occurrence of any particular profile in the population. Depending on the circumstances of the case, this may or may not “favor the defendant”. |
| Controls | Tests performed in parallel with experimental or evidence samples and designed to demonstrate that a procedure worked correctly. |
| Cytosine | One of the four chemical building blocks of DNA. |
| D1S80 | A VNTR locus used in forensic DNA typing. D1S80 is typed using PCR. |

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| D-loop | A hypervariable region of DNA sequence located on mitochondrial DNA. It is the region that is typed in mtDNA analysis for forensic purposes. |
| DNA database | A computer repository of DNA profiles. |
| DNA databank | Specifically in the context of an offender databank, an infrastructure including: enabling legislation, specifications for sample collection, analysis and search parameters, specifications for processing hits, and a database of DNA profiles. |
| Degradation | The breakdown of DNA into smaller fragments by chemical or physical means. |
| Denaturation | The separation of double-stranded DNA into single-stranded DNA by heat or chemical means. |
| Deoxynucleotides | The specific type of nucleotides that comprise DNA. |
| Deoxyribonucleic Acid (DNA) | The genetic material of organisms. It is composed of two complementary chains of nucleotides in the form of a double helix. |
| Dideoxynucleotides | A synthetic DNA nucleotide analogue. They are missing the portion that allows linkage to the next nucleotide in a chain, and therefore terminate DNA chains into which they become incorporated. |
| Differential Extraction | DNA extraction procedure in which sperm cells are separated from the DNA of other cells before their DNA is isolated. |
| Digest Gel | Diagnostic step in the RFLP DNA typing procedure that measures completeness of restriction enzyme digestion. |
| Diploid | Having two sets of chromosomes, in pairs; people are diploid organisms. |
| Diplomate of the ABC | A criminalist who has passed a general knowledge test in forensic science given by the American Board of Criminalistics. |
| Discrete Alleles | Any allele in a genetic typing system in which the detection method can clearly distinguish between the variants being tested. |
| DNA | Deoxyribonucleic acid. |
| DNA Amplification | Process of making multiple copies of a particular region of DNA using the polymerase chain reaction (PCR). |
| DNA band | (<i>see Band</i>) |
| DNA Fingerprint | A misnomer (<i>see DNA Profile, DNA Type</i>). |
| DNA Polymerase | An enzyme that synthesizes new DNA from an existing template. |
| DNA Profile | Profile compiled from the results of DNA testing of one or more genetic markers. |

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| DNA Probe | A short segment of DNA labeled with a radioactive or chemical tag that is used to detect the presence of a particular DNA sequence or fragment. |
| DNA Replication | The synthesis of new DNA from existing DNA. |
| DNA Type, Genetic Type | (see <i>DNA Profile</i>) |
| DOJ | Department of Justice. |
| Double Helix | Native form of DNA in which single strands are held together by complementary base pairing and twined around each other in the form of a double helix. |
| Double-Stranded DNA | Form of DNA in which single strands are held together by complementary base pairing. |
| DQα | (see <i>HLA DQα</i>) |
| DQA1 | (see <i>HLA DQA1</i>) |
| Electropherogram | A representation of alleles in the form of peaks after separation by electrophoresis and electronic detection |
| Electrophoresis | A technique in which molecules are separated by their rate of movement in an electric field; in the case of DNA the fragments are separated according to size. |
| Enzyme | A protein that is capable of speeding up a specific biochemical reaction but which itself is not changed or consumed in the process; a biological catalyst. |
| Epithelial Cells, E. Cells | Cells such as skin cells, vaginal cells or other cells normally found on an inner or outer body surface. (also see <i>non-sperm cells</i>) |
| Error | In the context of forensic DNA typing, the <i>reporting</i> of an incorrect inclusion or exclusion (genetic concordance or discordance) between two samples. |
| Error Rate | A specious concept that has become associated with admissibility of forensic evidence in large part because of some language in the Daubert decision. Although an error may occur in any particular case, no reliable way exists to determine any sort of rate (implies a constant over time). |
| Ethidium Bromide | Chemical dye that binds to double-stranded DNA and renders it visible in the presence of ultraviolet light. |
| Eukaryote; Eukaryotic | A type of cell that contains a nucleus and various organelles or organism composed of such cells. Humans are eukaryotes. |
| Evidence Sample | Sample for which the origin is unknown. Usually taken from the crime scene or people or objects associated with it. |
| Exclusion | Two samples that could not share a common origin, frequently a reference sample and an evidence sample. |

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| Extension | In the polymerase chain reaction (PCR), the addition of nucleotides to form a new DNA strand from a primed template. |
| FBI | Federal Bureau of Investigation. |
| Federal Rules of Evidence | An admissibility standard for scientific evidence that relies on federal rules 702 and 403. The criteria are reliability, relevancy, and more probative than prejudicial. |
| Fellow of the ABC | A criminalist who has passed a general knowledge test in forensic science, and also a specialty exam given by the American Board of Criminalistics. A Fellow must also pass a proficiency test given by an approved provider. |
| Frye Standard | An admissibility standard for scientific evidence that relies on the federal decision of <i>Frye vs. United States</i> . General acceptance in the relevant scientific community is the main criteria. |
| G | Single-letter designation of the base Guanine, one of the four building blocks of DNA. |
| Gamete | A haploid reproductive cell; sperm or egg. |
| Gel | Semisolid matrix (usually agarose or acrylamide) used in electrophoresis to separate molecules. |
| Gene | The basic unit of heredity; a sequence of DNA nucleotides on a chromosome. |
| Gene Frequency | (see <i>Allele Frequency</i>) |
| Genetic Concordance | When genetic profiles show the same types at all loci tested and no unexplainable differences exist. (also see <i>Match</i>) |
| Genetic Linkage, Linkage | Used to describe genetic markers which are often inherited together. They may or may not be physically linked (close together on the same chromosome) |
| Genetic Marker, Marker | A defined location on a chromosome having known genetic characteristics. |
| Genome | The total genetic makeup of an organism. |
| Genotype | The genetic makeup of an organism, as distinguished from its physical appearance or phenotype. It may pertain to one locus or many. |
| Guanine | One of the four chemical building blocks of DNA. |
| HaeIII | A restriction enzyme used in RFLP analysis. The standard enzyme used in the U.S. |
| Haploid | Having one set of chromosomes (compare <i>diploid</i>). |

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| Hardy-Weinberg Equilibrium | The condition, for a particular genetic locus and a particular population, with the following properties: allele frequencies are constant in the population over time and no statistical correlation exists between any two alleles possessed by individuals in the population; such a condition is approached in large randomly mating populations in the absence of selection, migration, and mutation. |
| Hemizygous | The situation in which a chromosomal element has no complement. This is normal for haploid organisms, and for some genetic elements, such as mtDNA in diploid organisms. |
| Heredity | The transmission of genetic characteristics from parent to offspring. |
| Heteroplasmy | In particular reference to mtDNA, the situation in which two populations of hemizygous molecules exist in an individual. |
| Heterozygote | A diploid organism that carries different alleles at one or more genetic loci on each of the paired chromosomes. |
| Heterozygous | Having different alleles at a particular locus. This is manifest by the presence of two bands or peaks at the locus in question. |
| Heterozygosity | The proportion of the population that has two different alleles (heterozygous) at a particular locus. It is preferable for loci used in forensic typing to exhibit a relatively high heterozygosity. |
| Hin fI | Restriction enzyme use in RFLP analysis. Most European labs use this enzyme. |
| HLA DQα | The historical name for a locus used in forensic DNA typing. It also refers to the first iteration of the commercial kit available for its analysis; (see HLA DQA1). |
| HLA DQA1 | The current name for a locus used in forensic DNA typing. It also refers to the second iteration of the commercial kit available for its analysis; (see HLA DQα). |
| HMW, High Molecular Weight | Use to describe DNA that is in large pieces, and has not been significantly broken down or degraded by physical or chemical means. |
| Homozygous | Having the same allele on both chromosomes at a particular locus. This is manifest by the presence of one band or peak at the locus in question. |
| HRP, Horseradish Peroxidase | Enzyme used in some forensic PCR typing systems; Produces a blue color marking the presence of a particular allele on a typing strip. |
| Human Genome Project | International project to decipher and catalogue all the information in the human genome. Completed in 2000. |

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| Human Leukocyte Antigen (HLA) | Cell structures that differ among individuals and are important for acceptance or rejection of tissue grafts or organ transplants; the DNA locus of one particular class, HLA DQA1, is used for forensic analysis with PCR. |
| Hybridization | Detection of particular DNA fragments or sequences by complementary base pairing of tagged probes. |
| Hypervariable | A DNA locus that shows extreme variation between individuals. |
| Hypervariable Region I (HVI) | In mtDNA, one of the two highly polymorphic areas in the control region in the D-loop. |
| Hypervariable Region II (HVII) | In mtDNA, one of the two highly polymorphic areas in the control region in the D-loop. |
| <i>In Vitro</i> | Literally “in glass”, it refers to biochemical reactions that take place out of the body, usually in a test tube or other laboratory apparatus. |
| Inclusion | Two samples that could share a common origin, frequently a reference sample and an evidence sample. |
| Independent Segregation | Offspring inherit one homologous chromosome of a pair from each parent, never two from the same parent. |
| Individualization | Two samples that share a common unique source or origin. |
| Interim Ceiling Principle | A now defunct calculation, that was originally endorsed by the NRC I committee, to multiply allele frequencies to determine the significance of a genetic concordance. It states that for each allele in a product calculation, the highest frequency among the groups sampled, or 10%, must be used, whichever is larger. (<i>also see</i> Ceiling Principle) |
| Isotope | An alternative form of a chemical element; used particularly in reference to the radioactive alternative forms, or radioisotopes. |
| K562 | Name of the standard sample used in RFLP forensic DNA analysis in the U.S. |
| Kilobase Pair (kb) | One thousand base pairs. |
| Length Polymorphism | A locus that exhibits variations in length when cut with restriction enzymes or amplified with PCR primers. In forensic DNA analysis, variable number tandem repeat (VNTR) loci and short tandem repeat (STR) loci are used. Polymorphism within the restriction enzyme site produces another kind of length polymorphism. |
| Likelihood ratio | The direct comparison of the probabilities of two competing hypotheses. When the evaluation is complete, the conclusion is phrased; “The evidence is X times more likely under proposition A than under proposition B.” |
| Linkage Equilibrium (LE) | When two or more genetic loci appear to segregate randomly in a given population. The genotypes appear randomly with respect to each other. |

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| Locus (pl. Loci) | The specific physical location of a gene on a chromosome. |
| Lumigraph | An X-ray film on which chemiluminescently labeled probes have left a mark determining the positions of particular DNA fragments; (see <i>Autoradiograph</i>). |
| Match | When genetic profiles show the same types at all loci tested and no unexplainable differences exist. (also see <i>Genetic Concordance</i>) |
| Match Criteria | A set of empirically derived laboratory-specific data that is used to set limits on the amount of difference within which two DNA fragments can be considered as the same size in RFLP analysis. |
| Membrane | The support (usually nylon) to which DNA is transferred during the Southern blotting procedure. |
| Mitochondrial DNA (mtDNA) | The small numerous circular DNA molecules found in mitochondria. |
| Mitochondrion (pl. Mitochondria) | An organelle found in eukaryotes, including humans. Specific hypervariable regions of mtDNA are typed in forensic testing. |
| MO | Modus operandi. The operational elements of a crime. |
| Molecular Weight | Refers to the molecular mass of a molecule. In DNA analysis, “molecular weight” and “band size” are often used interchangeably. |
| Molecular-weight size marker | DNA fragments of known size, from which the size of an unknown DNA sample can be determined. |
| Monoclonal | A group of chromosomes or cells derived respectively from one chromosome or cell, and thus are identical. |
| Monomorphic Probe | A DNA probe that detects an allele that is the same in everyone, hence shows the same pattern. Used as a diagnostic standard in RFLP analysis to check for sample-to-sample variation due to causes other than genetic polymorphism, such as environmental and experimental factors. |
| Multilocus Probe | A DNA probe that detects genetic variation at multiple sites; an autoradiogram of a multilocus probe yields a complex, stripe-like pattern of 30 or more bands per individual. This pattern was originally called a “DNA fingerprint” by its originator Alec Jeffreys. It was never used in the U.S. for forensic typing. (see <i>Single-Locus Probe</i>) |
| MVR | Minisatellite variant repeat. |
| NDIS | National DNA Index System |
| NIH | National Institutes of Health. |
| NIJ | National Institute of Justice. |

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| NIST | National Institute of Standards and Technology. |
| Noncoding | A region of DNA that lacks the capacity to produce a protein. |
| Non-sperm cells | Any cell not derived from a male gamete |
| Non-sperm cell fraction | In a differential extraction, the portion of a sample containing DNA isolated from non-sperm cells |
| Nuclear DNA | The DNA contained within the nucleus of a cell. It constitutes the vast majority of the cell genome. |
| Nucleic Acid | A general class of molecules that are polymers of nucleotides. DNA is a nucleic acid. |
| Nucleotide | A unit of nucleic acid. Technically, nucleotides are the raw building blocks of DNA or RNA. The term is often used informally in discussing the nucleotide “residues” left after the molecule is strung together. |
| Nucleus | An organelle found in the vast majority of eukaryotic cells, including most in the human body. It contains most of the cell’s genome. |
| Organelle | Any of the subcellular structures found in eukaryotic cells. |
| Organic Extraction | One method of isolating DNA from cells. |
| Partial, Partial Digest | The result of incomplete digestion by restriction enzymes. In RFLP analysis, this may confound interpretation of the result. |
| Peak | The visual image representing an allele on an electropherogram |
| PCR | (see <i>Polymerase Chain Reaction</i>) |
| PCR Product | The DNA amplified as a result of the polymerase chain reaction (PCR). |
| P_d | (see <i>Power of Discrimination</i>) |
| Phenotype | The physical appearance or functional expression of a trait. |
| Physical Evidence | Any evidence in a case that can be subjected to physical analysis. |
| Point Mutation | An alteration of one complementary nucleotide pair in chromosomal DNA that consists of addition, deletion, or substitution of paired nucleotides. |
| Polyacrylamide | A polymer that is used to separate relatively small DNA fragments. In forensic DNA analysis, used in AMP-FLP and STR analysis. |
| Polymarker | Common usage for a commercial kit called <i>AmpliType</i> [®] <i>PM</i> ; group of five different bi- and tri-allelic loci exhibiting sequence variation. Available as a kit for forensic DNA analysis. |

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| Polymerase | A category of enzymes that catalyzes the addition of subunits into a polymer. (see <i>DNA polymerase</i>) |
| Polymerase Chain Reaction (PCR) | A process mediated by a DNA polymerase, that can yield millions of copies of a desired DNA sequence. |
| Polymorphism | The presence of multiple alleles of a gene in a population. |
| Population | A group of individuals occupying a given area at a given time. |
| Population Substructure, Subpopulations | The existence of smaller mating groups within a larger community. |
| Power of Discrimination (P_d) | Used in reference to a genetic marker or combination of markers. Defines the potential power of a system to differentiate between any two people chosen at random. This can be calculated from the allele frequencies in a defined population. |
| Probe | A short segment of synthetic, tagged DNA, that is used to detect a particular DNA fragment or sequence. |
| Product Gel | Diagnostic tool used in PCR analysis to determine if a DNA sample has been successfully amplified. |
| Product Rule | A calculation based on population genetics that allows individual allele frequencies and genotype frequencies to be multiplied together to generate an overall profile frequency. |
| Proficiency Test | The analysis of material provided by an outside agency or laboratory to determine whether an analyst can accurately and reliably perform DNA typing; in open tests, the analysts are aware that they are being tested; in blind tests, they are unaware of being tested. Internal proficiency tests are conducted by the laboratory itself; external tests are conducted by an independent agency. |
| Prokaryote | A cell lacking a nucleus or any other subcellular organelles. Prokaryotes are all bacteria. |
| Protein | A class of biological molecules made up of amino acids; proteins provide much of the body's structure and function; enzymes are a subclass of proteins that perform specific biochemical functions. |
| Pull-up | Specifically related to ABD Genescan software, a peak seen in one color that is not due to the presence of DNA, but to incorrect compensation for the spectral overlap of the four dyes used in detecting multiple loci in one reaction. |
| Quality Assurance (QA) | The plan by which a laboratory may ensure that minimum professional standards for general operations are met. |
| Quality Control (QC) | The program used to monitor the quality of laboratory reagents, supplies, and equipment. The operational part of QA. |

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| Random Assortment | Describes the behavior of non-homologous chromosomes in the generation of gametes; either chromosome of a homologous pair may associate randomly with either from another pair. |
| Reannealing | The process of complementary single strands of DNA binding together; (see <i>hybridization</i>). |
| Reference Sample | A sample, often blood, taken from a known person, against which an evidence sample is compared. |
| Relevancy Standard | (see <i>Federal Rules of Evidence</i>) |
| Restriction Enzyme, Restriction Endonuclease | An enzyme that cuts DNA at specific locations determined by the DNA sequence. |
| Restriction Fragment Length Polymorphism (RFLP) | Variation in the length of DNA fragments produced by a restriction endonuclease (an enzyme) that cuts at a polymorphic locus. The polymorphism may be either in the restriction enzyme site or in the number of tandem repeat between the cut sites. Variable Number Tandem Repeat (VNTR) loci are used in forensic DNA analysis. |
| Reverse Dot Blot | A specific method used to detect DNA. It is employed in the <i>AmpliType® PM+DQAI</i> kit. The probe is bound to the typing strip, and challenged with the PCR product from the samples. |
| RFLP | (see <i>Restriction Fragment Length Polymorphism</i>) |
| RFLP Analysis | A technique that uses probes to detect length variation in a specific region of DNA. The variation is caused by differences in the number of tandemly repeated DNA sequences between restriction enzyme cut sites. |
| Sequence Polymorphism | Variation in specific base pairs at a particular locus. May include addition, deletion or substitution of base pairs. |
| Serology | The discipline concerned with the immunologic study of the body fluids. |
| Serum | The liquid that separates from blood after coagulation. |
| Sex Chromosomes (X and Y) | Chromosomes that are different between the two sexes; in humans, females are XX and males are XY. |
| Short Tandem Repeat (STR) | Repeating units of an identical (or similar) DNA sequence, where the repeat sequence unit is 2 to 5 base pairs in length. The repeat units are arranged in direct succession of each other, and the number of repeat units varies between individuals. |
| Single-locus probe | A DNA probe that detects genetic variation at only one site in the genome; an autorad produced using one single-locus probe usually displays one band in homozygotes and two bands in heterozygotes. |
| Single-Stranded DNA | A form of DNA where the two strands that normally make up the double helix are separated. |

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| Slot Blot | A diagnostic tool used in DNA analysis to determine how much human (higher primate) DNA has been extracted from a sample. Useful in making decisions about how much sample to use for various typing procedures. |
| Southern Blot, Blot | The technique for transferring DNA fragments that have been separated by electrophoresis from the gel to a nylon membrane. |
| Sperm (Cell) Fraction | In a differential extraction, the portion of a sample containing DNA from the sperm cells. |
| Spike | A peak in an electropherogram caused by electrical fluctuations in the current. (an artifact) |
| SSO | Sequence specific oligonucleotide. A short synthetic probe used to pinpoint a specific sequence using hybridization. SSOs are sometimes incorrectly referred to as ASOs. |
| Standards | Criteria established for quality control and quality assurance; Or established or known test reagents, such as molecular-weight standards. |
| State of the DNA | The condition of a DNA sample. It may be poor in quality or quantity, particularly after exposure to environmental conditions commonly encountered in crime scene samples. |
| STR | (see <i>Short Tandem Repeat</i>) |
| Streptavidin | Protein molecule used in the detection of amplified DNA on a reverse dot blot. Binds tightly to the protein biotin. |
| Stringency | Specific conditions used in the hybridization of DNA. Also refers to a specific parameter used when searching a DNA database |
| Stutter | A minor band appearing one repeat unit smaller than a primary STR allele. Occasionally the repeat unit is larger than the primary allele. |
| Subpopulation, Substructure | (see <i>Population Substructure</i>) |
| SWGDM | Scientific Working Group on DNA Analysis and Methods, formerly TWGDAM. |
| T | Single-letter designation of the base Thymine; one of the four building blocks of DNA. |
| Tandem Repeats | Repeating units of an identical (or similar) DNA sequence arranged in direct succession in a particular region of a chromosome. |
| Taq DNA Polymerase | The enzyme used to copy DNA in the polymerase chain reaction (PCR) reaction. |
| Taq Polymerase | (see <i>Taq DNA Polymerase</i>) |
| Thymine | One of the four chemical building blocks of DNA. |

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| Transfer Theory | Theory attributed to Edmond Locard regarding the transfer of trace evidence between two objects. |
| TWGDAM | Technical Working Group on DNA Analysis and Methods. |
| Variable Number Tandem Repeat (VNTR) | Repeating units of an identical (or similar) DNA sequence, arranged in direct succession in a particular region of a chromosome, for which the number varies between individuals. |
| VNTR | (see <i>Variable Number Tandem Repeat</i>) |
| Yield Gel | Diagnostic tool in DNA analysis. Aids in determining the quality and quantity of DNA extracted from a sample. Affects decisions about how much to use in various typing procedures. |