

ENFSI DNA Working Group Terms and Abbreviations

ENFSI DNA Working Group, Database Subgroup

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Terms and Abbreviations

Allele	In classical genetics, one of the alternative forms of the gene at a particular locus. In forensic DNA analysis, the term “allele” is commonly extended to include DNA fragments of variable length (STR) and/or sequence which may have no known transcriptional product but are detected in a polymorphic system.
Biological Father	The known reference sample provided by the biological father of a reported missing person.
Biological Mother	The known reference sample provided by the biological mother of a reported missing person.
Biological Sibling	The known reference sample provided by the biological sibling of a reported missing person.
Casework Laboratory	The forensic DNA laboratory responsible for a DNA profile developed from crime scene evidence.
DNA profile Comparisons	Comparisons of one DNA record to another for the purpose of establishing an association between two specimens.
Cold Match	Unexpected match made by a DNA database between a person and a stain without prior information. A cold match is a subcategory of a match.
Contract Laboratory	A laboratory, usually in the private sector, performing DNA analyses under contract to a national database participating laboratory.
Convicted Offender	The known reference sample from a person who has been convicted of a qualifying offense in a jurisdiction that requires that persons convicted of enumerated crimes or qualifying offenses provide a DNA sample for analysis and entry into a DNA database
Convicted Offender Laboratory	The forensic DNA laboratory responsible for a DNA profile developed from a reference sample provided by a known convicted offender.
Conviction Match	A Conviction Match occurs when the database matches a DNA profile developed from crime scene evidence to a DNA profile from a convicted offender. However, the crime from which the evidence was collected has already been solved.

Crime scene stain	A biological sample that is found at the scene of a crime. DNA analysis is conducted to establish an association between the crime scene and an individual, normally a perpetrator or a victim.
Deduced Victim Known	The DNA profile of a reported missing person that has been generated by examining samples associated with the missing person, e.g., hair brush. This profile can be compared to those of close biological relatives.
DNA Profile	A DNA profile consists of a set of DNA identification characteristics, i.e., the particular chemical form at the various DNA locations (loci), This allows the DNA of one person to be distinguished from that of another person.
Elimination Sample	A biological sample from a known individual which is analyzed for the purpose of identifying the loci corresponding to those in the DNA profile attributable to the perpetrator.
ESS	European Set of Standards as suggested by the ENFSI DNA QA programme.
Hit/Match	<p>A confirmed match between DNA profiles discovered by a database search at a single instant in time. It can be stain to stain or stain to person.</p> <p>For statistical purposes hits/matches with multiple identical profiles from the same case will be counted as one hit/match, but as separate hits/matches if they originate from different cases.</p> <p>In serial crimes, the total number of hits/matches is N-1 to the number of matching profiles (e.g.: a series of 8 identical stain profiles from <u>different</u> crimes yields 7 stain to stain hits/matches. If subsequently the DNA profile of a person matches the series, it yields 8 stain to person hits/matches. The number of stain to stain matches should then be removed from statistics.</p>
ISSOL	Interpol Standard Set of Loci, identical to ESS plus Amelogenin. Amelogenin is optional.
Likelihood ratio	Ratio of the probability of obtaining specific DNA results under two different hypotheses.
Locus	A specific location on a chromosome.
Match Report	After the database determines that two or more DNA profiles match, a report is generated and distributed to the relevant authority.
Maternal/ Paternal Relative	The known reference sample provided by a maternal or paternal biological relative of a reported missing person.

Missing Person sample	The known reference sample from an individual that is reported missing. The source of the DNA has been verified as originating from the missing person.
Mitochondrial DNA	Mitochondrial DNA (mtDNA) is found in the cell's mitochondrion. It is inherited only from the mother.
Mixture	A mixture is a sample that contains DNA from at least two different individuals. Frequently, multiple alleles may be visualized at different loci and this may make interpretation more difficult.
PCR	P olymerase C hain R eaction
Perpetrator	A known/unknown individual who commits a crime.
PGP	Pretty Good Privacy. Encryption software.
Personally Identifiable Information Population File	Informations such as names, dates of birth, or social security numbers which are normally used to identify individuals. Personally identifiable information does not include information derived from the examination of a DNA sample. A Population File consists of DNA profiles intended to represent a population segment. Population frequencies may be generated from the Population File and applied to the interpretation of forensic DNA analyses.
Population Sample	DNA profile of an anonymous individual or a sample where all personally identifiable information is removed. The profile is included in a population reference file for the purpose of generating statistical population frequencies.
Specimen	The biological sample that is subjected to DNA analysis for purposes related to forensic identification or for the generation of a population file.
Stain	See crime scene stain
STR	S hort T andem R epeat
Suspect	An individual whose identity is known to the police and who is suspected to be the perpetrator of a crime.
VPN	Virtual Private Network

Warm Match

A warm match occurs when a database matches DNA profiles based on prior knowledge. As a cold match, a warm match is verified by a qualified DNA analyst. A typical example of a warm match is when an investigating officer develops a suspect in a rape case, obtains a reference sample, and has a qualified DNA analyst search it against similar cases from the same jurisdiction. In this example, the investigator believes several crimes are related and uses database-generated matches as an investigative tool.