

Forensic Definitions

Disclaimer: *the following definitions are explanatory in nature and therefore some liberty has been taken due to the highly technical nature of the subject. Many of these definitions may not be “technically” accurate but for the purpose of forensic DNA use in the courtroom they are sufficient.*

A

Allele – any of the alternative forms of a gene that may occur at a given locus. In Forensic applications these will have numerical designation. Every person has 2 alleles at each loci (see locus), one contributed by the mother the other by the father.

Allele Frequencies - Term used to characterize genetic variation of a species population. How often a specific allele occurs at a given locus.

Alternate light source (ALS) - Equipment used to produce visible and invisible light at various wavelengths to enhance or visualize items of evidence (fluids, fingerprints, clothing fibers, etc.). If present many biological stains will fluoresce or change colors under the right light making them easier to locate. Some require special eye gear. Also known as “luma lights” or “blue-light specials”.

B

Bench notes - A laboratory analyst's recorded notes. May also be referred to as case notes. These are the notes that are made by the analyst when performing laboratory tests on the case and the items of evidence. These notes will include all that has been done to the evidence and test results from various procedures performed on the evidence. They contain the information used to make the final conclusion in the report. Without them there is no way to know what was done to the evidence. They are discoverable but need to be asked for specifically.

C

Chain Of Custody - A record of individuals who have had physical possession of the evidence and the process used to maintain and document the chronological history of the evidence. Documents can include, but are not limited to, name or initials of the individual collecting the evidence; each person or entity subsequently having physical possession of it; dates the

items were collected or transferred; where the item(s) were collected from; agency and case number; victim's or suspect's name (if known), and a brief description of the item.

D

DNA Mixtures - A sample that contains the DNA of more than one individual. Easily recognized by the number of alleles present at one locus. If, at even one locus in the DNA profile, there are more than 2 alleles present you know you have more than one individual contributing to that sample, therefore, it is a mixture of at least 2 contributors.

In the event of several contributors, 3 or more, great caution should be exercised when including individuals as contributors. The higher number of contributors the more caution should be used.

You will hear the terms “major contributor” and “minor contributor” when dealing with mixtures. This is an indication that there was obviously one profile that was “stronger” (meaning a greater amount was present) than the other. If, in that mixture, 2 complete (or mostly complete and this is a matter of discretion) profiles are present, one major to the other one, you will most likely get statistical values in relation to the profiles and the victim/offender. But in the case of complex mixtures (3 or more contributors) a credible analyst should not be comfortable issuing statistics.