

# **Forensic DNA Profiling Terminology**

**DNA – Deoxyribonucleic Acid** – your “genetic blueprint”; one half of your DNA is inherited from each parent.

**Locus / Loci** – location(s) of interest on the DNA molecule

**RFLP – Restriction Fragment Length Polymorphism** – first generation of DNA analysis utilizing restriction enzymes and gel electrophoresis to reveal fragment length variations that exist between individuals at approximately 5-8 loci.

**Autorad – Autoradiograph** – visual representation of an RFLP DNA profile showing fragment length variations on X-ray film (bands).

**STR – Short Tandem Repeat** – current method of DNA analysis utilizing PCR and capillary electrophoresis to reveal fragment length variations that exist between individuals at 13 loci and the gender marker amelogenin.

**CODIS – Combined DNA Index System** – national database containing DNA profiles from convicted felons and forensic cases.

**Mitochondrial DNA Analysis** – type of DNA analysis based on individual sequence variation found in the D-Loop region of a mitochondrion.

**Y-Chromosome Analysis** – type of DNA analysis involving STR analysis of the Y-chromosome.

**Amelogenin** – the gender marker locus, which reveals a length variation that exists between the male and female.

**PCR – Polymerase Chain Reaction** – “molecular Xeroxing”- amplification or increasing the amount of DNA at a specific locus.

**Thermalcycler** – instrument used to carry out DNA amplification.

**Capillary Electrophoresis** – method of separating amplified fragments of DNA by size to reveal fragment length variations at STR loci.

**Electropherogram** – visual representation of an STR DNA profile showing fragment length variations at STR loci on a graphical printout (peaks).