Polymerase Chain Reaction or PCR is a molecular genetic method used to amplify the DNA fragment. Today it is one of the most popular and successful molecular genetic methods, which is used in many scientific and applied fields. PCR has many modifications derived from the classical scheme of reactions - for example multiplex PCR, inverse PCR, nested PCR, asymmetric PCR, and a lot more. The forensic genetic analysis is mainly used as a PCR amplification method of the studied loci for fragment analysis, as part of the sequencing and then quantified as a real-time PCR.

The aim of this paper is to summarize the use of polymerase chain reaction in the forensic practice, and outline the methods in which PCR is used.