

Abstract

This master thesis deals with forensic genetics. Primarily is forensic genetics put into the historical context. Then, there is described a biological material and the possibility of detecting biological traces. Further work is focused on the analysis of DNA, while there are elaborated in detail the techniques used as nucleic acid isolation, quantification of DNA, as well as types of polymerase chain reaction (PCR). Also the thesis deals with methods of obtaining DNA profiles — electrophoresis and sequencing and their variants. Finally, the thesis concern the issues of interpretation of forensic genetic data. Forensic biological exercises for high school students are processed in the didactic part. It has been tested in practice in biological seminars at Jiráskovo gymnázium in Náchod.

Key words

Forensic genetics, biological traces, didactics of biology